DOCUMENT RESUME

ED 233 757 JC 830 356

AUTHOR	Morante, Edward A.; And Others
TITLE	Report to the Board of Higher Education on the Character and Effectiveness of Remedial Programs in New Jersey Public Colleges and Universities in Fall, 1981.
INSTITUTION	New Jersey State Dept. of Higher Education, Trenton. New Jersey Basic Skills Council.
PUB DATE	19 Nov 82
NOTE	168p.
PUB TYPE	Statistical Data (110) -- Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	*Academic Achievement; College Students; Community Colleges; Grade Point Average; Postsecondary Education; *Program Effectiveness; Program Evaluation; *Remedial Instruction; State Colleges; State Surveys; State Universities; Student Attrition; Student Evaluation; Testing Programs
IDENTIFIERS	*New Jersey

ABSTRACT

The status of remedial programs in New Jersey's public colleges is analyzed in this report for fall 1981. Following introductory material on New Jersey's basic skills assessment program, the character of the state's remedial programs is examined, focusing on the number of students tested, identification of students needing remediation, placement criteria, enrollment in remedial courses, skills-deficient students in college-level courses, and graduation credits. Next, the report describes the remedial evaluation guidelines developed by the Assessment Advisory Council of the Basic Skills Council (BSC) and the evaluative data provided by the colleges. Finally, findings are presented for the community and state college sectors and Rutgers University and the New Jersey Institute of Technology related to passing rates in remedial courses, attrition, credit ratio, grade point average, pre- and post-testing, and performance in subsequent courses. These findings indicate that: (1) a relatively large number of students, especially those in mathematics courses, did not complete their remedial courses; (2) students who completed their remedial courses persisted in college at the same rate or better than those who did not need remediation; and (3) in general, students who completed their remediation passed their regular courses at the same rate as non-remedial students. The bulk of the report consists of data tables detailing findings by college and sector. The BSC's recommendations concerning remedial education are included. (LL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED233757

Report to the Board of Higher Education on the Character and Effectiveness of Remedial Programs in New Jersey Public Colleges and Universities in Fall, 1981

NEW JERSEY BASIC SKILLS COUNCIL

November 19, 1982

Edward A. Morante, Director

Madan Capoor, Chairman
Middlesex County College

Guy Altieri
Salem Community College

Herbert Barkan
New Jersey Institute of Technology

Cecile Cantrell Hanley
William Paterson College

Rupert Jemmott
Educational Opportunity Fund Program

Frederic Kreisler
Department of Higher Education

Richard Nurse
Rutgers University

Daniel O'Day
Kean College

Don Oppenheim
Rutgers University

Charles Pine
Rutgers University - Newark

Anita Ulesky
Caldwell College

JC 830 356

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Edward A. Morante

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Program Assistants

Shari Faskow

Irene M. Nomejko

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.
☒ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ASSESSMENT ADVISORY COMMITTEE

Madan Capoor, Chairperson
Middlesex County College

Kwaku Armah
Department of Higher Education

Edward L. Delaney
Kean College of New Jersey

Scott Drakulich
Essex County College

Jean Fitts
Department of Higher Education

Donald Fucci
Ramapo College

Joy Hughes
Burlington County College

James Ramsey
Rutgers - Newark

Claudette Smith
Department of Higher Education

Charles Watts
Department of Higher Education

MATHEMATICS ADVISORY COMMITTEE

Charles Pine, Chairperson
Rutgers - Newark

Sunday Ajose
Essex County College

George Brock
Ocean City High School

James Brown
University High School (Newark)

Judith DeVito
West Windsor-Plainsboro High School

Angel Eguaras, Jr.
Atlantic Community College

Charles Franke
Seton Hall University

Joseph Rosenstein
Rutgers - New Brunswick

Roman Voronka
New Jersey Institute of Technology

Darryl Walke
Somerset County College

Gabriella Wepner
Ramapo College of New Jersey

READING AND WRITING ADVISORY COMMITTEE

Daniel O'Day, Chairperson
Kean College

Joseph DePierro
Seton Hall University

Dennis Donahue
New Jersey Institute of Technology

Delbert Earisman
Upsala College

Diane Grumsberg
Thomas A. Edison College

William Lutz
Rutgers - Camden

Miles D. MacMahon
Essex County College

Susan McNamara
William Paterson State College

Martha Palmore
West Windsor-Plainsboro High
School

Alice Peters
Bergen Community College

Adele Stern
Paramus High School

Richard Swartz
Camden County College

TASK FORCE ON THINKING

Anita Ulesky, Chairperson
Caldwell College

Gerald E. Coleman
Passaic County Community College

William Daly
Stockton State College

Delbert Earisman
Upsala College

Matthew Lipman
Montclair State College

Miles D. MacMahon
Essex County College

Dorothy Mulligan
Jersey City State College

Beatrice Seagull
Rutgers - Newark

TABLE OF CONTENTS

Contents	Page
SUMMARY AND RECOMMENDATIONS	viii
INTRODUCTION	1
CHARACTER OF REMEDIAL PROGRAMS	1
Number of Students Tested	1
Students Identified as Needing Remediation	3
Placement Criteria	3
Individual Colleges, 1980 and 1981	3
Comparison With Basic Skills Council Standards	3
Enrollment	6
COLLEGE POLICIES	8
Enrollment in Remedial Courses	8
Skills Deficient Students in College-Level Courses	8
Graduation Credits	8
EFFECTIVENESS OF REMEDIAL PROGRAMS	8
Evaluation Guidelines	9
Data Provided	10
Results	
Passing Rates	10
Attrition	11
Credit Ratio	12
Grade Point Average	12
Pre- and Post-Testing	13
Performance in Subsequent Courses	14
CONCLUDING STATEMENT	15

Contents Page

FIGURES

FIGURE 1 Comparison of the Percentage of Entering Students Tested, by Sector - Fall, 1980-Fall, 1981 2

FIGURE 2 Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation, Statewide - Fall, 1980-Fall, 1981 2

FIGURE 3 Comparison of the Percentage of Students Identified by the Colleges as Needing Remediation With the Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, Community Colleges - Fall, 1981 4

FIGURE 4 Comparison of the Percentage of Students Identified by the Colleges as Needing Remediation With the Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, State Colleges - Fall, 1981 4

FIGURE 5 Comparison of the Percentage of Students Identified by the College as Needing Remediation With the Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, Rutgers - Fall, 1981 5

FIGURE 6 Comparison of the Percentage of Students Identified by the College as Needing Remediation with the Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, NJIT - Fall, 1981 5

FIGURE 7 Comparison of the Percentage of Students Enrolled in Remediation, Statewide - Fall, 1980-Fall, 1981 7

TABLES

TABLE 1 Comparison of the Number of Percentage of Entering Students who were Tested, by Sector - Fall, 1980-Fall, 1981 16

TABLE 2 Comparison of the Percentage of Entering Students Who are Tested, by College - Fall, 1980 - Fall, 1981 17

TABLE 3 Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Reading, by Sector - Fall, 1980-Fall 1981 18

TABLE 4 Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation in Reading, by College - Fall, 1980-Fall, 1981 19

TABLE 5 Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Writing, by Sector - Fall, 1980-Fall, 1981 20

TABLE 6 Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation in Writing, by College - Fall, 1980-Fall, 1981 21

TABLE 7 Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Math Computation, by Sector - Fall, 1980-Fall, 1981 22

TABLE 8 Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation in Math Computation, by College - Fall, 1980-Fall, 1981 23

TABLE 9 Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Elementary Algebra, by Sector - Fall, 1980-Fall, 1981 24

TABLE 10 Comparison of the Percentage of Students Who Were Identified as Needing Remediation in Elementary Algebra, by College - Fall, 1980-Fall, 1981 25

TABLE 11 Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Reading, by College - Fall, 1980-Fall, 1981 26

TABLE 12 Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Writing, by College - Fall, 1980-Fall, 1981 27

TABLE 13 Comparison of the Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Math Computation, by College - Fall, 1980-Fall, 1981 28

TABLE 14 Comparison of the Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Elementary Algebra, by College - Fall, 1980-Fall, 1981 29

TABLE 15 Comparison of the Number and Percentage of Students Identified by the Colleges as Needing Remediation With the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, Community Colleges - Fall, 1981 30

TABLE 16 Comparison of the Number and Percentage of Students Identified by the Colleges as Needing Remediation With the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, State Colleges - Fall, 1981 31

Contents | Page

TABLE 17 Comparison of the Number and Percentage of Students Identified by the Colleges as Needing Remediation With the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, Rutgers University - Fall, 1981 32

TABLE 18 Comparison of the Number and Percentage of Students Identified by the College as Needing Remediation With the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas, NJIT - Fall, 1981 33

TABLE 19 Comparison of the Number and Percentage of Students Enrolled in Remediation in Reading, by Sector - Fall, 1980 - Fall, 1981 34

TABLE 20 Comparison of the Percentage of Students Enrolled in Remediation in Reading, by College - Fall, 1980-Fall, 1981 35

TABLE 21 Comparison of the Number and Percentage of Students Enrolled in Remediation in Writing, by Sector - Fall, 1980-Fall, 1981 36

TABLE 22 Comparison of the Percentage of Students Enrolled in Remediation in Writing, by College - Fall, 1980-Fall, 1981 37

TABLE 23 Comparison of the Number and Percentage of Students Enrolled in Remediation in Math Computation, by Sector - Fall, 1980-Fall, 1981 38

TABLE 24 Comparison of the Percentage of Students Enrolled in Remediation in Math Computation, by College - Fall, 1980-Fall, 1981 39

TABLE 25 Comparison of the Number and Percentage of Students Enrolled in Remediation in Elementary Algebra, by Sector - Fall, 1980-Fall, 1981 40

TABLE 26 Comparison of the Percentage of Students Enrolled in Remediation in Elementary Algebra, by College - Fall, 1980-Fall, 1981 41

TABLE 27 Comparison of the Number of Colleges by Sector that Grant Graduation Credits for Remedial/Developmental Work - Fall, 1980-Fall, 1981 42

TABLE 28 Data Presented by the Colleges on the Effectiveness of Their Remedial Programs for Fall, 1981 Entering Students 43

Contents Page

TABLE 29 Passing Rates of Fall, 1981 Entering Full-Time Students Enrolled in Remedial Courses in Reading, Writing, Computation, and Elementary Algebra, by Sector - Academic Year 1981-1982 44

TABLE 30 Percentage of Full-Time and Part-Time Students Passing Remedial Courses, by College - Fall, 1981 45

TABLE 31 Attrition Rates for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Reading, by Sector - Fall, 1981 to Spring, 1982 46

TABLE 32 Attrition Rates and Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Reading, by College - Academic Year 1981-1982 47

TABLE 33 Attrition Rates for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Writing, by Sector - Fall, 1981 to Spring, 1982 48

TABLE 34 Attrition Rates and Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Writing, by College - Academic Year 1981-1982 49

TABLE 35 Attrition Rates for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Computation, by Sector - Fall, 1981 to Spring, 1982 50

TABLE 36 Attrition Rates and Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Computation, by College - Academic Year 1981-1982 51

TABLE 37 Attrition Rates and Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Elementary Algebra, by College - Academic Year 1981-1982 52

TABLE 38 Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Reading, by Sector - Fall, 1981 to Spring, 1982 53

TABLE 39 Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Writing, by Sector - Fall, 1981 to Spring, 1982 54

TABLE 40 Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Computation, by Sector - Fall, 1981 to Spring, 1982 55

Contents | Page

TABLE 41 Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Reading, by Sector - Academic Year 1981-1982 56

TABLE 42 Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Reading, by College - Academic Year 1981-1982 57

TABLE 43 Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Writing, by Sector - Academic Year 1981-1982 58

TABLE 44 Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Writing, by College - Academic Year 1981-1982 59

TABLE 45 Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Computation, by Sector - Academic Year 1981-1982 60

TABLE 46 Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Computation, by College - Academic Year 1981-1982 61

TABLE 47 Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in Elementary Algebra, by College - Academic Year 1981-1982 62

TABLE 48 Pre-Post Testing, Reading 63

TABLE 49 Pre-Post Testing, Writing 67

TABLE 50 Pre-Post Testing, Math 70

TABLE 51 Pre-Post Testing, Elementary Algebra 73

TABLE 52 Performance in Subsequent Courses, English 76

TABLE 53 Performance in Subsequent Courses, Math 78

TABLE 54 Performance in Subsequent Courses, Social Science/Humanities 80

TABLE 55 Performance in Subsequent Courses, Science 82

TABLE 56 Performance in Subsequent Courses, Other 84

APPENDICIES Page

APPENDIX A Interpreting the Results of the Testing Program 85

APPENDIX B Policies Regarding Students Who Fail to Remove Basic Skills Deficiencies 87

APPENDIX C Reasons Given by Colleges for Not Testing Appropriate Students 91

APPENDIX D Problems Encountered in Testing, Placing, and Instructing Students in Basic Skills, By Sector 92

APPENDIX E 1981 Annual Basic Skills Questionnaire 93

APPENDIX F Guidelines for Preparation of Institutional Report on Remedial Program Effectiveness 104

A Non-Technical Paper on the Use of a Single Group Pre-Test and Post-Test Design in the Evaluation of the Effectiveness of Remedial Instruction 109

SUMMARY AND RECOMMENDATIONS

Testing

The goal of testing all full-time freshmen who enter New Jersey public colleges has been nearly met. In 1981, 95% of all full-time entering freshmen were tested with the New Jersey College Basic Skills Placement Test. Only one public college fell below 90% in testing its full-time students.

However, 24% of the entering part-time students were not tested in the Fall of 1981. While the community college sector improved its testing percentage by 8 points to 73% since the previous report, continued efforts are needed across the State to assess the proficiencies of all part-time students.

After five years, the institutions should have had sufficient time to adjust their testing policies and procedures in order to satisfy the Board's mandate to test all students. Consequently, the Council recommends that the Department of Higher Education take steps to ensure compliance. To do otherwise not only undermines the policies of the Board, but also does a disservice to students entering our colleges.

Standards

A number of colleges continue to use placement criteria well below the averages for the state and below the level that would seem appropriate for college level work. Effective placement of students depends in part on the use of appropriate criteria. The Council suggests that all colleges, at a minimum, use NJCBSPT scores in the "Lacking Proficiency in Some Areas" category as one of their placement criteria in determining whether individual students need remediation or are ready to attempt college-level courses.

Enrollment

Most colleges continue to improve their performance in actually enrolling skills deficient students they had identified as needing remediation. However, as the 1981 data indicate, there is still much room for improvement:

Students Identified by the Colleges as Needing Remediation Who Were Not Enrolled in an Appropriate Remedial Course After One Year*

	Full-Time	Part-Time
Reading	15%	37%
Writing	10%	30%
Computation	20%	43%
Elementary Algebra	32%	61%

---

*Includes some students who dropped out of college after one semester.

The Council recommends that no student who has been identified as needing remediation be allowed to enroll in college-level courses, at least those requiring proficiency in the related basic skill areas, without first demonstrating proficiency in these basic skills. When students "succeed" in college-level courses in spite of serious deficiencies in related basic skills the quality of the curriculum needs to be examined critically.

Policies

Some colleges continue to report that they have policies which either provide graduation credit for remediation and/or allow students to enroll in college-level courses (which ostensibly require basic skills) without ensuring that these students are proficient in these basic skills. The Council recommends that such policies be discontinued. Further, it seems appropriate that those college-level courses which some colleges claim do not require proficiency in the basic skills be carefully examined.

Algebra

Many colleges continue to view proficiency in elementary algebra as an unnecessary requirement for a college degree although most institutions do require it for certain majors. The Council reiterates its earlier recommendation that elementary algebra be required of all students seeking a baccalaureate, A.S., A.A., or appropriate A.A.S. degree from a New Jersey public college.

Data Collection

Many colleges have improved considerably in their collection, analysis, and reporting of data on the effectiveness of their remedial programs. Many others, however, either do not place a high priority on evaluation or need considerable assistance in performing and reporting their evaluations. The Council recommends no significant changes in either the format or the kinds of the data requested for next year's report. The Council plans to conduct additional workshops to aid colleges in complying with both the Annual Questionnaire and the Evaluation Guidelines. The Council also recommends that the Department of Higher Education provide whatever assistance it can to the colleges to enable them to improve their collection and analysis of data.

Remedial Program Effectiveness

The Basic Skills Council reaffirms the conclusion it reached in last year's report: remediation can and does make a valuable contribution. Statewide, students who complete needed remedial courses tend to persist in school at a higher rate, achieve higher grade point averages, and complete more of their non-remedial courses than do those students who do not complete or do not enroll in needed remedial programs. Further, those students who complete remedial courses tend to improve on post-tests and perform about as well in subsequent college level courses as do those students not needing remediation.

Institutional Variation

On every effectiveness variable assessed, wide variations occur among the colleges. The Council recommends that colleges review their basic skills programs in light of the data in this report toward a goal of improving their remedial efforts. Although much progress has been made, the following areas of concern need to be addressed:

a. Sufficient time should be permitted and appropriate curricular levels should be provided for students to complete remediation;

b. Passing rates of students in some remedial courses at some colleges seem artificially inflated;

c. The ability of students at some colleges to avoid enrolling in needed remedial courses should be curtailed;

d. The ability of students at some colleges to achieve "success" in college level courses without completing remediation should be reviewed;

e. Relatively small increases in post-testing scores at some colleges indicate a need to review the effectiveness of remedial instruction at these institutions.

Longitudinal Follow-up

The Council will continue to assist those colleges who need to improve their testing, placement, and remedial programs as well as their reporting of the requested data. Finally, the Council recommends more systematic longitudinal study of basic skills students to determine the extent of their success beyond the first year.

I. INTRODUCTION

New Jersey has the most comprehensive statewide basic skills assessment program in higher education in the United States. The use of the New Jersey College Basic Skills Placement Test (NJCBSPT) in the last five years has enabled the public colleges to use a common base of information which can be used by administrators and faculty to assess and decide upon various aspects of their basic skills programs such as: placement criteria; testing and placement procedures; remedial programs and policies; and effectiveness of programs. The results of the NJCBSPT and the evaluation reports are being used by colleges across the state to develop comprehensive, effective remedial programs to improve the proficiencies of students entering our colleges. The collection and analysis of data have led colleges to reassess their research needs including the establishment of a student data base and the upgrading and more extensive use of their computer facilities for academic purposes. These efforts have sometimes created burdens, especially economic burdens, at many colleges as they struggle to provide needed remediation to many of their entering freshmen.

This is the fourth annual report by the Basic Skills Council on the character and effectiveness of remedial programs in New Jersey public colleges. Since the first report, presented in the winter of 1980, a quantum leap has occurred in both the quality and quantity of data submitted by the colleges. In fact, in the Council's opinion, more data are being collected on basic skills and remedial programs than in any other area of higher education.

The Council appreciates the effort devoted to this task and believes that the results justify the effort.

II. CHARACTER OF REMEDIAL PROGRAMS

This portion of the report deals with the character of remedial programs at New Jersey public colleges in Fall, 1981. It is divided into two major sub-sections. The first is statistical character, including: students tested, identification of students needing remediation, placement criteria, and students enrolled in remediation. The second, sub-section presents information on colleges' policies including: enrollment in remedial courses, skills-deficient students in college-level courses, and graduation credits. Detailed data on the character of colleges' remedial programs are included in Tables 1 to 27.

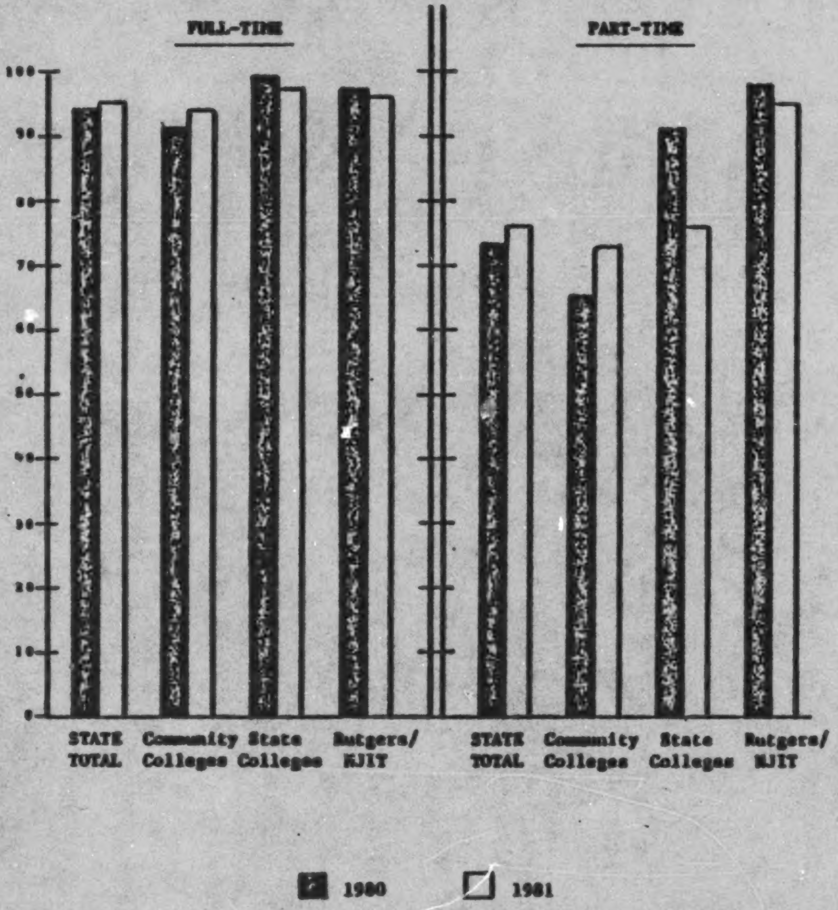
Number of Students Tested

Ninety-five percent (95%) of the full-time students entering our public colleges in the Fall of 1981 were tested with the NJCBSPT. As Figure 1 indicates, this was a slight increase (+1%) over 1980. Among the sectors, the county colleges increased by three percentage points while the state colleges and Rutgers were down slightly.

Among the part-time students, 76% of the entering students were tested (See Figure 1). This was a 3% jump over 1980 and reflects the large increase in part-time students tested by the county colleges. The state colleges and Rutgers decreased somewhat over the past year.

FIGURE 1

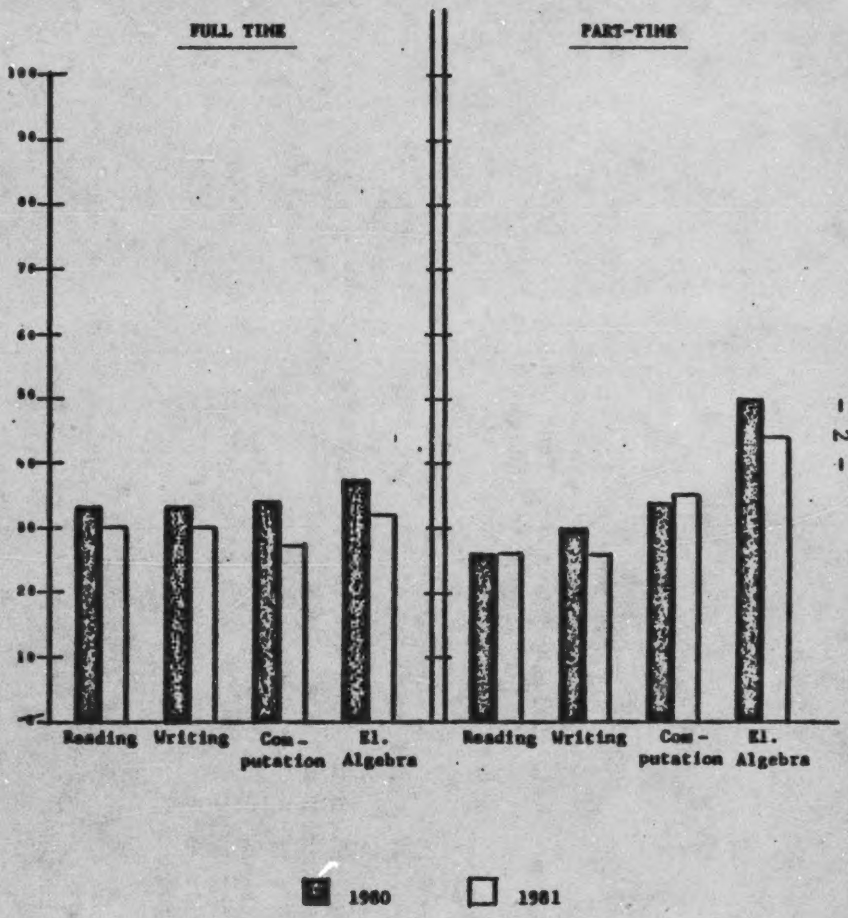
COMPARISON OF THE PERCENTAGE* OF ENTERING STUDENTS TESTED, BY SECTOR
Fall, 1980 - Fall, 1981



*Of those required to be tested.

FIGURE 2

COMPARISON OF THE PERCENTAGE OF TESTED STUDENTS WHO WERE IDENTIFIED AS NEEDING REMEDIATION, STATEWIDE
Fall, 1980 - Fall, 1981



The Council recommends that the Department of Higher Education maintain close contact with colleges that have not yet carried out the Board's mandate to test all entering freshmen. After four years of testing, there can be no legitimate reason for not testing these students.

Tables 1 and 2 present more detailed information on sector and college compliance with testing.

Students Identified as Needing Remediation

A smaller percentage of students were identified as needing remediation in 1981 than in 1980. The statewide decline occurred primarily for full-time students in all four basic skills areas: reading, writing, computation, and elementary alegebra. (See Figure 2). In reading, the decline occurred mainly among the community colleges while the decline for writing occurred largely among the state colleges. The decline for computation was consistent for all three sectors. Tables 3 to 10 provide specific information by sector and college for each basic skills area.

The number of students identified by a particular college is mainly dependent upon two variables: 1) the level of proficiency of the entering freshmen class and; 2) the placement criteria set by each college. This report will focus on placement criteria.

Placement Criteria

Individual Colleges, 1980 and 1981. There was a wide range among the colleges in the placement criteria used. All of the colleges, with the exception of certain parts of Rutgers University, used the NJCBSPT for placement. Colleges established different criteria for determining which students needed remediation. In comparing the colleges' placement criteria used in 1980 and 1981, it appears that the county colleges tended to have somewhat higher criteria in 1981 than 1980, while the state colleges' criteria were slightly lower in 1981. NJIT and Rutgers had virtually the same levels of placement criteria during this time. In comparing the sectors, the county colleges had generally lower placement criteria than did the other sectors.

Tables 11 to 14 provide detailed information on criteria used at each college during 1980 and 1981 for placement in reading, writing, computation, and elementary algebra.

Comparison with Basic Skills Council Standards. The number of students identified by the colleges as needing remediation is lower than the number identified by the Basic Skills Council* as lacking proficiency in the basic skills. Figures 3 to 6 provide graphic representation, by sector, of this difference.

---

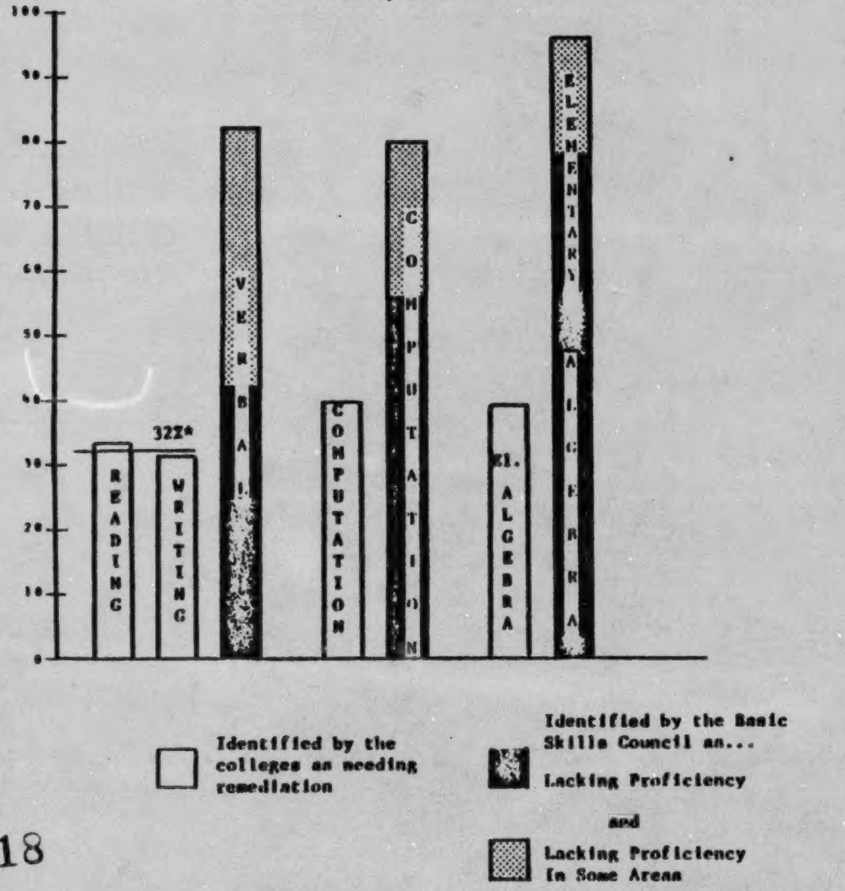
*See Appendix A for a more detailed description of the Basic Skills Council's recommended proficiency categories.

FIGURE 3

Comparison of the Percentage of Students Identified by the Colleges as Needing Remediation with the Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

COMMUNITY COLLEGES

Fall, 1981



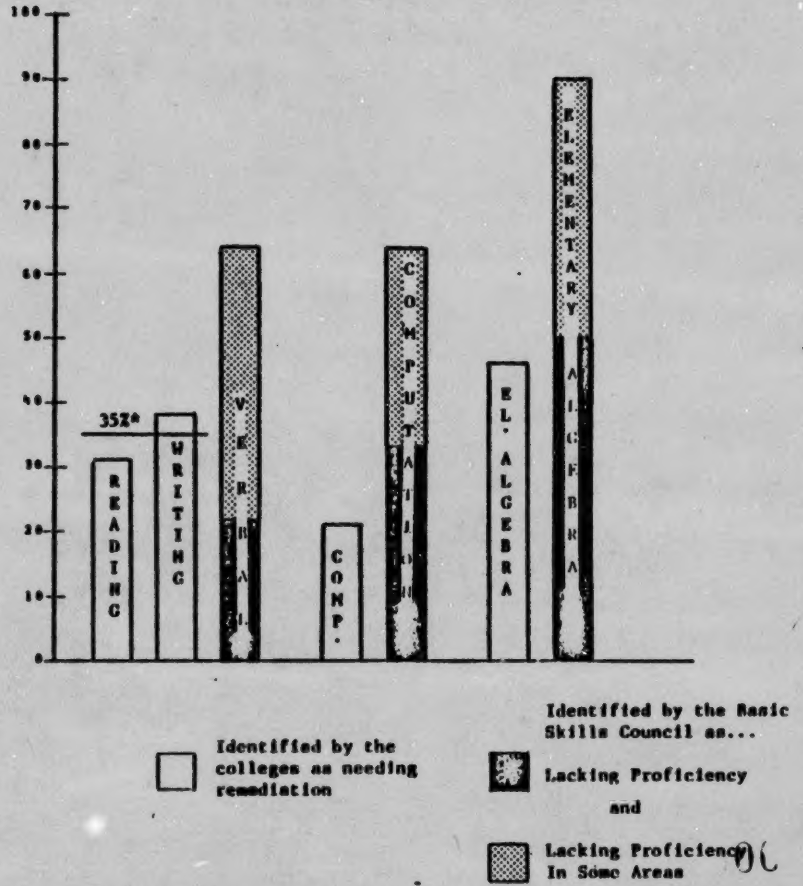
*An average is given since some students may be included once in reading and then again in writing. Adding the two categories would result in duplicated numbers. Since the Basic Skills Council did not differentiate between reading and writing, the data they report is unduplicated (i.e. a student deficient in both reading and writing is counted once as being deficient in "verbal" skills)

FIGURE 4

Comparison of the Percentage of Students Identified by the Colleges As Needing Remediation with the Percentage Idenfified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

STATE COLLEGES

Fall, 1981



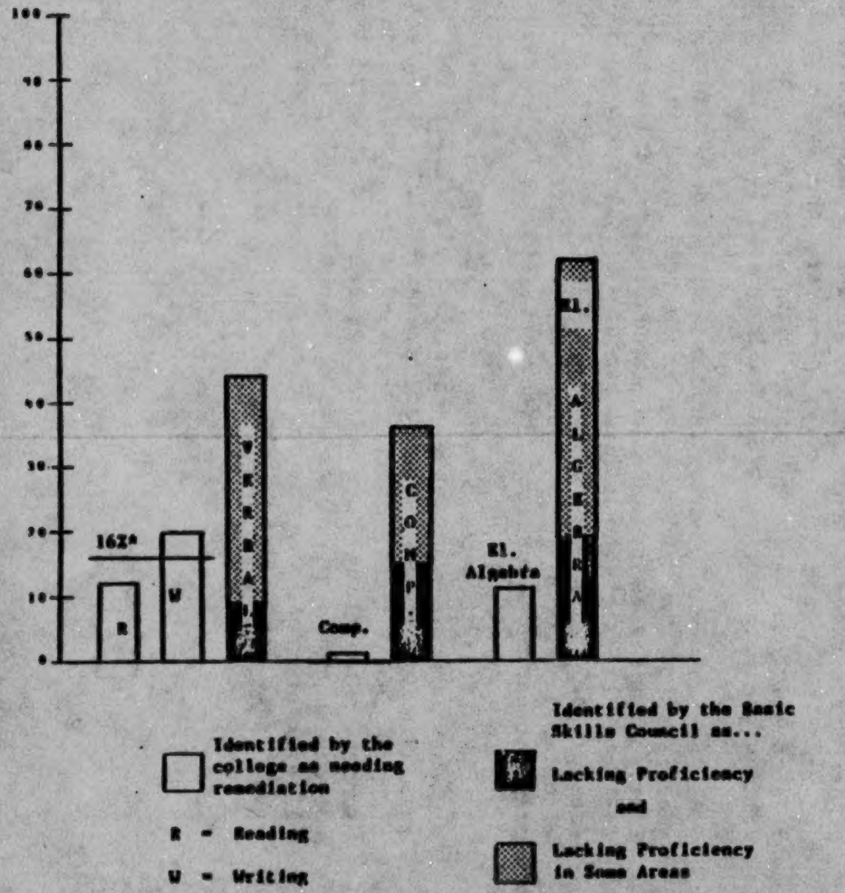
*An average is given since some students may be included once in reading and then again in writing. Adding the two categories would result in duplicated numbers. Since the Basic Skills Council did not differentiate between reading and writing, the data they report is unduplicated (i.e. a student deficient in both reading and writing is counted once as being deficient in "verbal" skills).

FIGURE 5

Comparison of the Percentage of Students Identified by the Colleges As Needing Remediation with the Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

RUTGERS

Fall, 1981



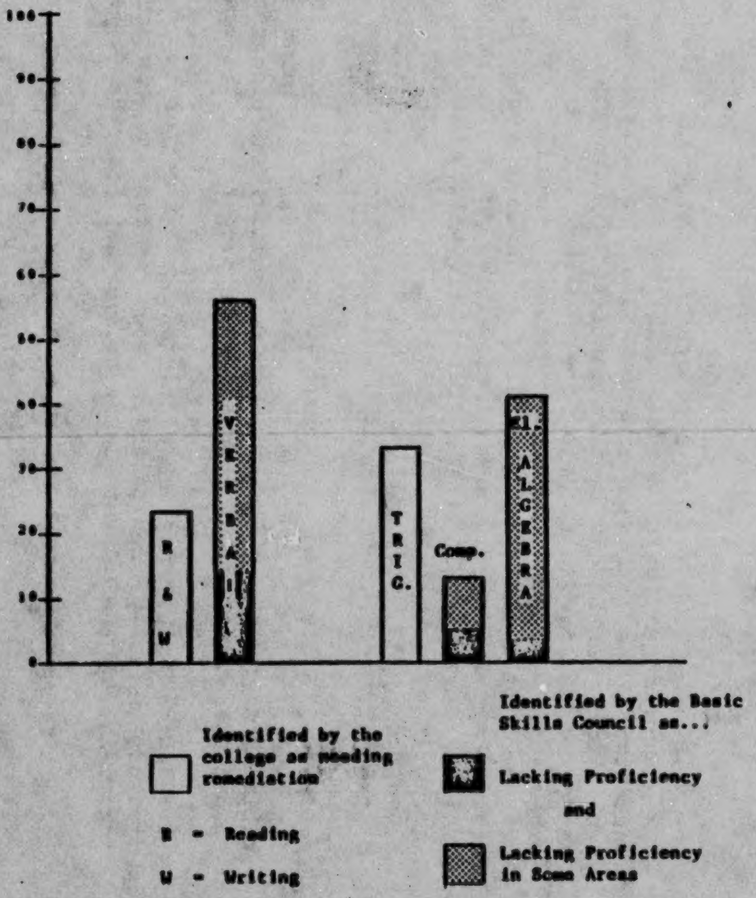
*An average is given since some students may be included once in reading and then again in writing. Adding the two categories would result in duplicated numbers. Since the Basic Skills Council did not differentiate between reading and writing, the data they report is unduplicated (i.e. a student deficient in both reading and writing is counted once as being deficient in "verbal" skills).

FIGURE 6

Comparison of the Percentage of Students Identified by the Colleges As Needing Remediation with the Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

NJIT

Fall, 1981



NOTE: Math remediation at NJIT begins at the level of trigonometry.

The Basic Skills Council recognizes that each college will establish its own placement criteria in determining which students are in need of remediation. The Council, however, also recognizes that students who lack proficiency and do not receive remediation in a timely fashion have little chance of success in college level courses. In light of this, the Council expects each of the colleges to establish reasonable levels of proficiency and to place those students identified as needing remediation into appropriate remedial programs. It seems reasonable, if there is such a construct as "college level proficiency", that there will be some point or range below which students would be inadequately prepared for college level work. The Council suggests, therefore, that all colleges, at a minimum, establish levels of proficiency in the "Lacking Proficiency in Some Areas" category. This is in keeping with the Council report of 1980 which defined this category as follows: "While some of these students may be able to perform well in first-year college courses, in the Council's opinion many may not, and colleges must examine their academic standards and placement systems carefully before assuming that these students are prepared in the basic skills."

Tables 15 to 18 provide information by sector comparing the numbers of students actually identified by each sector and how many would have been identified using the proficiency categories of the Basic Skills Council.

Enrollment

With the exception of remedial writing, colleges statewide enrolled a higher percentage of their students, who needed remediation in 1981 than they did in 1980. (See Figure 7). However, the state college sector showed a decrease since 1980 in the enrollment of students needing remediation in both writing and mathematics. (See Tables 19 to 26).

Despite this general increase statewide, sizeable numbers of students identified by the colleges are not enrolling in needed remedial courses. In fact, if one were to use the standards presently set by the colleges, 1296 full-time students who needed remediation in reading were not enrolled in an appropriate course. More than 900 full-time students were not appropriately enrolled in writing. The figure for students not enrolled in remediation in computation and elementary algebra are 1455 and 2044 respectively.

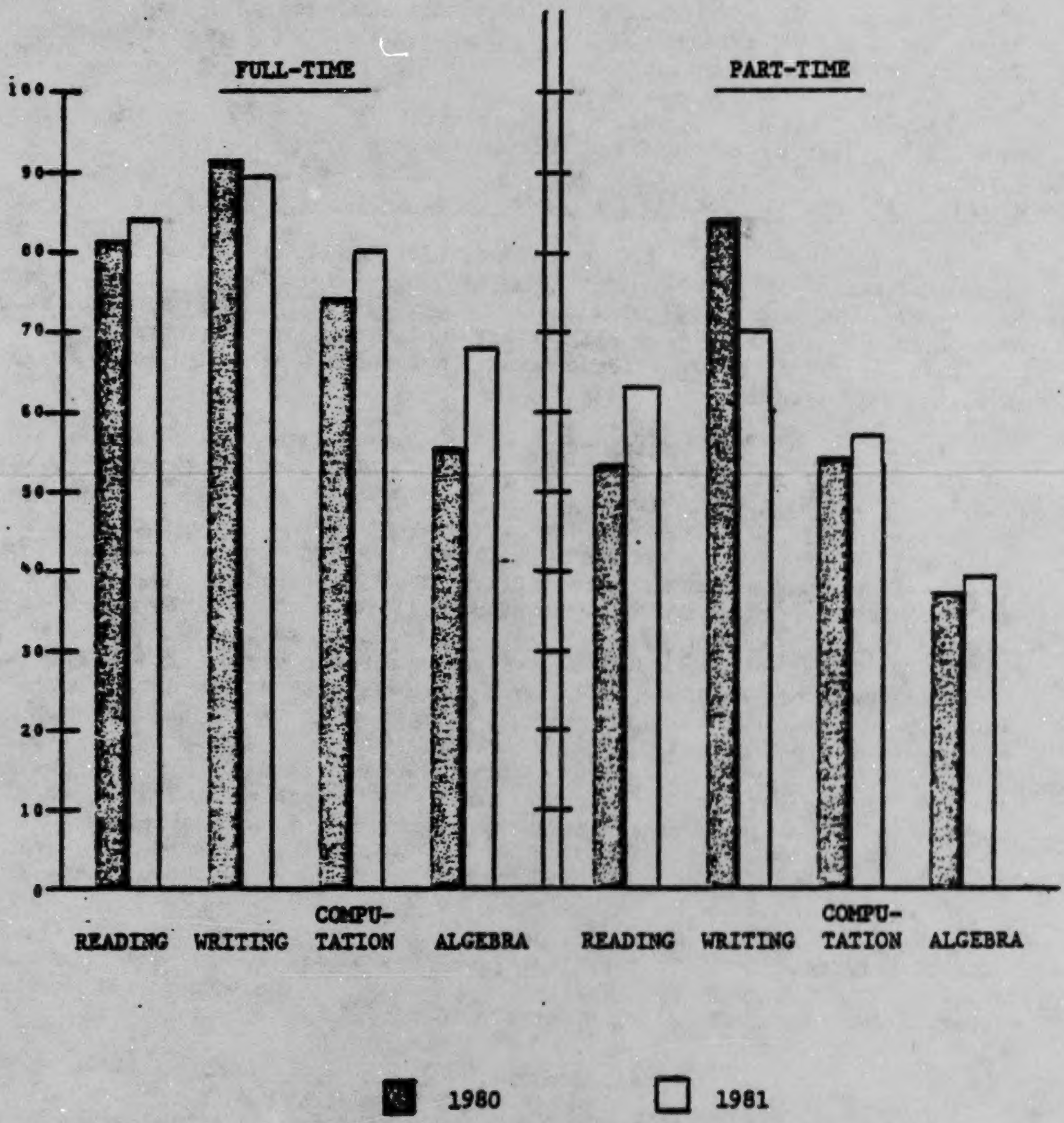
The figures stated above do not include the hundreds of part-time students needing remediation in each basic skills area who were not enrolled in a remedial course. The data presented later in the effectiveness portion of this report indicate that many of those students who were identified as needing remediation but did not enroll in an appropriate remedial course performed poorly in college and, not infrequently, dropped out. The Council believes students who are identified as needing remediation must enroll in an appropriate remedial program.

FIGURE 7

COMPARISON OF THE PERCENTAGE* OF STUDENTS ENROLLED IN REMEDIATION

STATEWIDE

Fall, 1980 - Fall, 1981



*Of those identified by the colleges as needing remediation in each skill area.

III. COLLEGE POLICIES

Enrollment in Remedial Courses

As indicated in Appendix B, most colleges have some type of time limit within which skills deficient students must enroll and pass remedial courses. Eight colleges do not have such limits while one college had a limit for English but not for mathematics.

Appendix B also specifies each institution's policy regarding students who fail to remove basic skills deficiencies.

Skills Deficient Students in College - Level Courses

Most colleges do not allow students with skills deficiencies in writing or mathematics to enroll in regular college-level English or mathematics courses before completing remediation in that area. The three colleges that do not adhere to this type of policy either limit the courses available to the students or offer a "challenge exam" before entrance into the regular, college-level course.

Six state colleges and eight county colleges permit students with reading deficiencies to enroll in regular, college-level courses in English before completing remediation in reading.

Most colleges allow students with skills deficiencies to take regular college-level courses other than English and Math. Some colleges place some type of limit or control over which college-level courses these skills deficient students may take, either by requiring remedial courses as prerequisites or by establishing a list of approved courses. The Basic Skills Council questions which types of college-level courses do not require proficiency in the basic skills. Some colleges also depend on counseling and advisement to ensure that skills-deficient students do not enroll in college--level courses for which they are not prepared. Several colleges indicated that those students with multiple skills deficiencies may not enroll in regular college-level courses until their deficiencies are corrected.

Graduation Credits

Seven community colleges, four state colleges, and two colleges of Rutgers University still offer graduation credit for at least some remedial or developmental courses (See Table 27). (Two of these community colleges reported changing this policy effective in the 1982-83 academic year.)

IV. EFFECTIVENESS OF REMEDIAL PROGRAMS

New Jersey colleges provide a wide variety of remedial programs to many of their entering students. This is necessary to bridge the gap between the level of proficiency of entering students and the demands of college curricula. To do otherwise would either preclude the opportunity for a college education for thousands of students who have the ability (if not the skills proficiency) to succeed in college or force the colleges to lower standards in order to ensure success in courses. Both of these options would lead to undesirable outcomes.

The need for remedial programs at the college level engenders a need to examine how effective these programs are. An ineffective program not only wastes dollars, it hurts the very students it is designed to help. The Board of Higher Education recognized the need for evaluation when, in 1977, in establishing the Basic Skills Assessment Program it mandated that:

> The Administration of each institution shall report annually to its governing board and to the [Basic Skills] Council on the character and effectiveness of its remedial program, and that the Council, through the Department of Higher Education, shall inform the Board of Higher Education annually on the progress achieved by the institutions in this regard.

Evaluation Guidelines

The Basic Skills Council first reported to the Board on the effectiveness of the colleges' remedial programs in 1980. The diversity of data presented by individual institutions went well beyond the diversity of the programs offered in the State. In the process of collecting and analyzing the data presented by the colleges, the Council recognized the need for more standardization of the data requested. This resulted in the formation of an Assessment Advisory Committee which was charged to study this problem and make recommendations on how to evaluate remedial programs.

The Assessment Committee proceeded to develop a comprehensive evaluation system for basic skills and remedial instruction. This system incorporates a revised Annual Questionnaire (See Appendix E) and a set of guidelines on the kinds of data to be included in the Annual Report (See Appendix F).

In its deliberations, the Committee took into account both the measurement and evaluation difficulties encountered by the colleges as well as the purposes of the Annual Report defined in the Board mandate. They noted that both process and outcome would be important in any evaluation effort. They assumed that the Council, the Department, and the Board would be interested primarily in the outcomes of the remedial programs while the faculty and administrators at each institution would be interested in both process and outcome.

Thus, the evaluation guidelines request information concerning the following: history of the program, placement criteria and efficacy, course descriptions, support services, staffing patterns, college policies, student character information, and results. With the exception of results, all of these variables are process variables. They describe how a college carries out its remedial program. Since these process variables are idiosyncratic to a particular institution, only the outcome variables, the results, would be comparable for evaluation. Hence, the following outcome indicators are presented and described:

1. Passing rates of students in remedial courses;

2. Attrition rates;

3. Grade point averages;

4. Ratio of credits earned versus credits attempted;

5. Pre- and post-testing; and

6. Performance in subsequent non-remedial college level courses.

The Assessment Committee and the Basic Skills Council decided that these six outcome variables represent a reasonable and comprehensive method of evaluating the outcome of remedial programs.

One additional point must be emphasized. None of these six outcome variables examined in isolation is sufficient to evaluate an educational program. The sum of these six, however, provide an adequate assessment of an institution's remedial efforts. Each of these outcome variables is more fully explained below.

Data Provided

Table 38 provides information on the ability of the colleges to present the data requested in the Guidelines. As this table indicates most of the colleges presented data in the areas requested. In fact, although it is not reported in the table, there has been a significant increase over the past two years in both the quantity and quality of the data presented. Montclair and Glassboro, among the state colleges, wrote particularly fine reports. In the community college sector, Atlantic, Burlington, Camden, and Mercer wrote very good reports. However, some colleges will need to improve their reports in the coming year, while a few colleges will need to entirely revamp their systems of data collection and analysis in order to present significant information on remedial program effectiveness.

The results described on the following pages are presented according to the six outcome variables described above. Throughout the section, data will be described with an emphasis on sectors rather than on individual colleges. All of the data reported are based on the Fall, 1981 full-time freshmen entering New Jersey public colleges.

RESULTS

Passing Rates

The first of the six variables to be examined is the passing rates of students in remedial courses. In general, low passing rates are often a warning signal that something is lacking. High passing rates are often a good sign but may be misleading; other data are needed to confirm a successful program.

Table 29 provides information on the percentages of students in each public college sector passing remedial courses in the verbal skills (reading and writing) and in mathematics (computation and elementary algebra). (See Table 30 for this information by individual college.) The data indicate a wide range of passing percentages among the colleges. This range extends from a high of 95% in reading at one college to a low of 14% in elementary algebra at another college.

The data also indicate that a relatively large number of students are not completing their remedial courses. This was especially true for mathematics where more than half of the students did not complete their remedial courses. Possible reasons for this finding include:

- inappropriate curricular levels (e.g., some institutions may need to offer more than one semester or one course level in order to serve the specific needs of their students;
- inappropriate placement (e.g., some students may have been placed at a level higher than they could handle);
- the quality of the instruction provided; or
- various student-related factors (e.g., changes in career goals or inadequate motivation).

Attrition

The second variable to be examined in assessing the effectiveness of remedial programs is the rate at which students drop out of college - the attrition rate. In general, the goal is to keep the attrition rate as low as possible. A high attrition rate usually indicates that students' needs are not being met by the college. Traditionally, community colleges have had a higher attrition rate than four year colleges because the community college sector has open enrollment and attracts many students who, although they want to attempt college, may not have the motivation to succeed. Students leave a college for a variety of reasons including: academic performance, transfer to another institution, relocation, financial aid, and career changes and obligations. It is important, therefore, to examine not only the attrition rates of students needing remediation but also how these students compare to those students who do not need remediation.

In Tables 31 to 47, (covering data for attrition, credit ratio, and grade point averages) the students are divided into the following groups:

No Need for Remediation - These are students who do not need remediation in a particular basic skills area, although some may need remediation in other skills areas.

Passed Remedial Course - This includes students who needed remediation in a given skills area and passed the remedial course.

Did Not Complete Remediation - These students needed remediation in a given skill area but did not complete the remedial program in their area of need.

Not Enrolled in Remediation - These students needed remediation but for some reason did not enroll in the needed remedial course.

Tables 31, 33, and 35 provide information by sector on the percentage of students divided into each of these four groups who dropped out of college after one semester. Each table, divided by basic skills area, presents the attrition rate for each of the four public sectors of higher education. (Tables 32, 34, 36, and 37 provide the attrition rates for each college.)

The data in these tables indicate that students who complete their remedial courses persist in college at the same, and sometimes better, rate than those who did not need remediation. Further, those students who needed remediation but either did not complete it or did not enroll in the remedial course dropped out of college after one semester at a much higher rate than those students who completed their remedial course. This was true for reading, writing, and computation. The data was insufficient for elementary algebra to make any summary conclusion.

While there was wide variation among the colleges, the data consistently indicated that successful remediation is related to lower attrition rates. In addition, the results inevitably lead one to conclude that students who need remediation should take it during their first semester.

Credit Ratio

The ratio of credits earned to credits attempted serves as a third variable in evaluating remedial programs. This ratio can range from a low of zero (for students who fail or drop all of the courses in which they enrolled) to a high of 1.00 (for those students who successfully receive credit for all of the courses in which they enrolled). The credit ratio, thus, is a measure of students' performance. For this report, the credit ratio requested was for students in Spring, 1982 courses bearing credit for graduation (non-remedial courses). The ratio takes into account all grades including passing, failing, withdrawals, incompletes, and so on. The closer the credit ratio is to 1.00, the more successful students have been in the semester following enrollment in remediation.

Tables 38, 39, and 40 provide data, by sector, for the same four student groups in each basic skills area as was previously presented for attrition. (Tables 32, 34, 36, and 37 also provide similar data for individual colleges.) They show that, at least for the community college sector, students who complete remediation earn credits for the college courses they attempt at a rate considerably higher than those students who needed remediation but did not complete it or enroll in it. This was true for the following three basic skills areas: reading, writing, and computation. Among the sectors, no useable data were available for the state colleges or NJIT.

There was a wide range among the colleges in the credit ratio for the four student groups. Some colleges need to examine their programs as to the reasons their students are able to perform well in college level courses despite failure to complete remediation.

Once again, the data presented for elementary algebra were so sparse as to make impossible a summary statement of the results.

Grade Point Average

The fourth variable used to assess remedial programs is grade point average or GPA. The use of GPA as a measure of performance is based upon the notion that students who complete needed remediation should be able to earn satisfactory grades in non-remedial courses the semester following remediation. The colleges were asked to report a comparison of mean GPA as well as the number and percent of students whose GPA fell below 2.00 (the equivalent of a C average which is generally considered the minimum acceptable average for graduation from college). The GPA referred to students' performance in regular college-level courses for the Spring, 1982 semester.

Tables 41, 43, and 45 present the sectors' data according to the basic skills areas for each of the same four student groups as presented above. (Tables 42, 44, 46, and 47 present similar data according to individual colleges.)

The data in Tables 40 to 42 indicate that students who complete a remedial course in reading, writing, or computation achieve consistently higher grades than students who need remediation but do not complete it or enroll in it. The group who completed remediation did not achieve GPA's as high as the group not needing remediation. This is not an unexpected finding since the goal of successful remediation is to help students perform satisfactorily and not necessarily at the same level as students not needing remediation.

The data in these tables also indicate that a sizeable number of students achieved grades below a satisfactory level (less than 2.00). In fact, on this variable, those who completed remediation were closer to those who didn't complete remediation or didn't enroll in a needed remedial course than to the group that didn't need remediation.

Finally, these tables present additional confirmation of the wide range of GPA's across our colleges. At some colleges, it appears that many students achieved satisfactory grades in college level courses without completing needed remediation. One possible reason for this phenomenon is that many of these students were erroneously identified as needing remediation although they were actually proficient. An alternate possibility is that students are able to achieve satisfactory grades in regular college-level courses without possessing basic skills proficiency. Some colleges need to review their programs in light of these possibilities.

Pre- and Post-Testing

The fifth variable used in assessing the effectiveness of remedial programs is the most difficult to establish because of statistical difficulties.* Pre- and post-testing is a most important variable because students who successfully complete remediation improve their basic skills proficiencies and should be able to demonstrate this improvement on a post-test. One method of evaluating this is to compare post-test scores with pre-test scores and statistically compute whether the improvements noted are greater than what would normally be expected. One difficulty in this procedure is a statistical phenomenon called "regression toward the mean," whereby, simply by chance, some students who score at or near the bottom on any measure (such as a basic skills pre-test) will improve (move toward the mean) on a second measure given later (such as a post-test). Thus, without any instruction, a certain percentage of students will always show improvement the second-time around. This phenomenon often leads to spuriously positive results unless pre- and post-test data are carefully analyzed.

---

* The Basic Skills Council has issued a separate paper on how to best report the results of pre- and post-testing. See page 109.

An additional method of evaluating post-test results is to measure the percentage of students achieving competence on a post-test. This method has an advantage in that it measures not merely whether students improve statistically but also how many improve to a point where they no longer need remediation. If this particular method of evaluation is not employed, some students might appear to improve significantly, but, in fact, would still be in a need of remediation.

Unfortunately, only one college (Middlesex) reported the data based on this method. Among the thirteen colleges statewide (seven county colleges and six state colleges) who presented data on pre- and post-testing, all reported in terms of gainscores (i.e., how much gain there was from pre- to post-test score). Because of the lack of uniformity of the test data presented (different tests were used by different colleges), summary statements and conclusions are difficult to draw. Nevertheless, the data presented in Tables 48 to 51 lead to three general conclusions:

1. Virtually every college program for which data were presented had a statistically significant gain in scores from pre- to post-testing. These data should be viewed with caution, however, because of the "regression toward the mean" effect and because, in some cases, only students completing the course took the post-test.

2. Although the gains reported from pre- to post-test are statistically significant, many are not as large as would be hoped for. Many students who completed the course were still below the college's level of proficiency. These students would probably need to take additional remediation before enrolling in the sequential college level course.

3. Again, there was considerable variation both among the colleges and, in some cases, among the courses offered at a particular college.

Performance in Subsequent Courses

This is the last, and in some ways, the most important variable studied in assessing the performance of remedial programs. Colleges were asked to compare those students who completed remediation with those students who did not need remediation. It is the essence of remediation to enable students to achieve satisfactory performance in the subsequent college level courses which require proficiency in the basic skills. Data were requested on this comparison for four types of courses:

- first semester regular college course in English or composition;
- next regular sequence course in mathematics;
- social science or humanities course; and
- natural or physical science course.

Most of the colleges presented data on this variable, but some of the institutions reported on only one section of a course which meant that the number of students was so small as to make comparisons meaningless. In addition, the data presented by the colleges was so varied in terms of courses as to make sector summaries misleading. (The data by individual colleges are included in Tables 52 to 56.)

Analysis of the data presented indicates that, here too, there was a wide variation among the colleges. In general, however, those students who completed their remediation passed the regular courses at about the same rate (and in some cases better rate), than the students who did not originally need remediation. This was not true in all cases and some colleges may need to review some of their courses.

Concluding Statement

In 1983, New Jersey's public colleges will begin their sixth year of mandated basic skills testing and evaluation. Over the past five years, the colleges have made great progress toward meeting the needs of their entering students who lack basic skills proficiency. Overall, colleges have steadily improved in their ability to test entering students, place those needing remediation in appropriate courses, and evaluate the effectiveness of their remedial programs. New Jersey's public colleges are to be congratulated for their diligence and perseverance in carrying out the Board's mandate. It is important to bear in mind, however, that some colleges have progressed more quickly than others. Some colleges still have a long way to go toward providing effective remediation for all their skills deficient entering students.

The Basic Skills Council will continue to work closely with these colleges to help them test all students who are required to be tested, increase understanding of the test results for placement, and improve the quality of evaluation efforts. In conclusion, the Council offers this report, not only to meet the Board's mandate, but also in the hope that public acknowledgement of the college's progress will contribute to the further improvement of their basic skills programs.

TABLE 1

Comparison of the Number and Percentage* of Entering Students Who Were Tested, By Sector

Fall, 1980 - Fall, 1981

	STUDENTS	COMMUNITY COLLEGES		STATE COLLEGES [1]		RUTGERS/ NJIT		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981
FULL	N	18,481	18,160	9,724	8,748	6,363	7,025	34,568	33,933
TIME	%	91	94	99	97	97	96	94	95
	% RANGE	100 - 70	100 - 76	100 - 96	100 - 13	100 - 97	100 - 96	100 - 70	100 - 13
PART	N	6,086	6,448	1,300	1,512	587	417	7,955	8,377
TIME	%	65	73	91	86	98	95	73	76
	% RANGE	100 - 33	100 - 0	100 - 69	100 - 70	100 - 98	100 - 95	100 - 33	100 - 0

*Of those required to be tested.

[1] Stockton State College did not differentiate between full-time and part-time students. All students required to be tested are included as full-time.

TABLE 2

Comparison of the Percentage of Entering Students Who Were Tested, By College

Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
	1980	1981	1980	1981
STATE COLLEGES				
Glassboro State College	100	100	100	88
Jersey City State College	96	97	88	95
Kean College of New Jersey	98	98	99	86
Montclair State College	100	100	99	96
Ramapo College of New Jersey	97	99	69	100
Richard Stockton State College	100	100	–[1]	–[1]
Trenton State College	100	100	100	79
Wm. Paterson College of NJ	96	92	93	70
Thomas A. Edison State College	–[2]	–	–[2]	13
NJIT	100	100	100	100
RUTGERS UNIVERSITY	97	96	98	95
COMMUNITY COLLEGES				
Atlantic	100	96	49	39
Bergen	79	98	54	88
Brookdale	98	99	78	91
Burlington	100	99	100	91
Camden	89	90	33	43
Cumberland	100	100	98	100
Essex	89	96	90	40
Gloucester	96	90	39	0
Hudson	100	100	100	100
Mercer	95	90	66	86
Middlesex	100	98	76	81
Morris	87	90	40	48
Ocean	70	76	33	43
Passaic	85	97	85	70
Salem	95	96	91	46
Somerset	100	99	96	99
Union	86	94	78	78
UCTI	95	99	95	–[1]

---

[1] Institution does not differentiate between full-time and part-time students.

[2] 1980 data not available.

TABLE 3

Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Reading[1]
By Sector
Fall, 1980 - Fall, 1981

STUDENTS		COMMUNITY COLLEGES		STATE COLLEGES		RUTGERS/ NJIT		STATE COLLEGES	
		1980	1981	1980	1981	1980	1981	1980	1981
FULL TIME	N	7,305	6,392[3]	3,038[2]	2,725[3]	1,053	1,072	11,396	10,189
	%	39	35	31	32	17	15	33	30
	% RANGE	92 - 5	84 - 9	58 - 14	39 - 20	13 - 17	16 - 10	92 - 5	84 - 9
PART TIME	N	1,401	1,721	487	432	46	29	1,934	2,182
	%	25	27	37	29	8	7	26	26
	% RANGE	57 - 7	77 - 10	69 - 7	43 - 19	-	-	69 - 7	77 - 10

---

[1] Bergen County College, Essex County College and some units of Rutgers University offer some courses that integrate Reading and Writing. These courses are included in this table.

[2] Stockton State College does not separate full and part-time students identified as needing remediation; all students are included in full-time figures.

[3] Stockton, Ocean and UCTI did not differentiate between full- and part-time students; all students are included in full-time figures for their respective sectors.

TABLE 4

Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation in Reading, By College

Fall, 1980 - Fall , 1981

	Full-Time		Part-Time	
STATE COLLEGES	1980	1981	1980	1981
Glassboro State College	45	37	28	39
Jersey City State College	51	33	62	33
Kean College of New Jersey	58	39	69	43
Montclair State College	27	26	21	21
Ramapo College of New Jersey	36	31	25	27
Richard Stockton State College	31	29	–[1]	–[1]
Trenton State College	20	20	20	24
Wm. Paterson College of NJ	14	34	7	19
Thomas A. Edison State College	–[2]	–	–[2]	27
NJIT	13	10	0	0
RUTGERS UNIVERSITY	17	16	8	7
COMMUNITY COLLEGES				
Atlantic	48	45	31	30
Bergen	39	38	25	23
Brookdale	34	31	28	31
Burlington	44	41	16	26
Camden	47	30	42	29
Cumberland	57	48	40	32
Essex	77	80	–[3]	77
Gloucester	38	22	40	–[4]
Hudson	69	54	12	36
Mercer	31	42	31	31
Middlesex	20	22	11	15
Morris	24	24	20	14
Ocean	5	9	7	–[1]
Passaic	77	84	53	67
Salem	27	39	24	13
Somerset	16	19	27	10
Union	51	32	35	27
UCTI	53	55	49	–[1]

[1] Institution did not differentiate between full-time and part-time.

[2] 1980 data not available.

[3] Essex County College did not distinguish full-time and part-time in 1980.

[4] Gloucester County College did not test any part-time students in 1981.

NOTE: The percentage of students identified as needing remediation may vary for two reasons: (1) student population and (2) placement criteria.

TABLE 5

Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Writing
By Sector
Fall, 1980 - Fall, 1981

	STUDENTS	COMMUNITY COLLEGES[1]		STATE COLLEGES		RUTGERS/ NJIT		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981
FULL	N	5,924[2]	5,900[3]	4,410[2]	3,282[3]	1,087	1,205	11,421	10,387
TIME	%	31	32	45	38	17	17	33	31
	% RANGE	93 - 19	90 - 18	94 - 15	55 - 16	17 - 15	18 - 14	94 - 15	90 - 14
PART	N	1,428	1,615	640	569	178	42	2,246	2,226
TIME	%	25	25	49	38	31	10	30	26
	% RANGE	71 - 11	80 - 11	97 - 7	62 - 17	--	--	97 - 7	80 - 10

[1] Bergen County College, Essex County College and some units of Rutgers University offer Reading and Writing in the same course. Figures are included in Table 3.

[2] Essex County College and Stockton State College did not separate full and part-time students; all students are included in full-time figures for their respective sectors.

[3] Stockton and UCTI did not separate full- and part-time students. All students are included in full-time figures for their respective sectors.

TABLE 6

Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation in Writing, By College

Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
STATE COLLEGES	1980	1981	1980	1981
Glassboro State College	20	21	20	25
Jersey City State College	61	46	69	41
Kean College of New Jersey	62	55	68	62
Montclair State College	94	16	97	17
Ramapo College of New Jersey	62	48	33	49
Richard Stockton State College	31	30	–[1]	–[1]
Trenton State College	35	40	27	37
Wm. Paterson College of NJ	15	51	7	29
Thomas A. Edison State College	–[2]	–	–[2]	36
NJIT	15	14	0	0
RUTGERS UNIVERISTY	17	18	31	10
COMMUNITY COLLEGES				
Atlantic	32	36	26	27
Bergen	–[3]	–[3]	–[3]	–[3]
Brookdale	32	33	27	34
Burlington	72	62	24	42
Camden	44	51	42	48
Cumberland	60	51	44	39
Essex	37	28	–[2]	35
Gloucester	35	36	59	–[4]
Hudson	63	57	11	36
Mercer	38	33	37	25
Middlesex	22	29	18	20
Morris	28	29	30	24
Ocean	19	30	21	–[1]
Passaic	93	90	71	80
Salem	40	54	41	24
Somerset	20	18	14	11
Union	31	34	23	25
UCTI	25	20	27	–[1]

[1] Institution did not differentiate between full- and part-time.

[2] 1980 data not available.

[3] Bergen offers Reading and Writing in the same course. Figures are included in Table 4.

[4] Gloucester County College did not test any part-time students in Fall, 1980.

NOTE: The percentage of students identified as needing remediation may vary for two reasons: (1) student population and/or (2) placement criteria.

TABLE 7

Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Math Computation[1]
By Sector
Fall, 1980 - Fall, 1981

	STUDENTS	COMMUNITY COLLEGES		STATE COLLEGES		RUTGERS/ NJIT[2]		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981
FULL	N	8,027	7,177[3]	2,078	1,818[3]	197	35	10,302	9,030
TIME	%	44	42	33	31	3	1	34	30
	% RANGE	82 - 22	89 - 13	65 - 13	64 - 4	--	--	82 - 13	89 - 1
PART	N	1,860	2,303	358	364	154	0	2,372	2,667
TIME	%	34	38	37	32	26	--	34	35
	% RANGE	57 - 12	85 - 19	72 - 13	47 - 3	--	--	72 - 13	85 - 3

---

[1] Kean College, Trenton State College, Somerset County College and certain units of Rutgers include basic math in their Algebra courses; Stockton State College's "Other Math" includes both basic math and algebra; data from these colleges are included in Table 9.

[2] NJIT's remedial math program begins at the level of trigonometry and thus is not included in Table 7 or 9. Of those students tested the following students were identified as needing remedial math (i.e., trigonometry): Fall 1980 - F.T. 223 (35%), P.T. 4 (80%); Fall 1981 - F.T. 224 (33%), P.T. 5 (42%).

[3] Thomas Edison, Essex, Ocean and UCTI did not differentiate between full and part-time students; all students are included in full-time figures for their respective sectors.

TABLE 8

Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation in Math Computation, By College

Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
STATE COLLEGES	1980	1981	1980	1981
Glassboro State College	33	36	30	47
Jersey City State College	65	58	72	22
Kean College of New Jersey[1]	-	-	-	-
Montclair State College	36	24	42	38
Ramapo College of New Jersey	13	4	14	3
Richard Stockton State College[1]	-	-	-	-
Trenton State College[1]	-	-	-	-
Wm. Paterson College of NJ	24	34	13	18
Thomas A. Edison State College	-[3]	-	-[3]	64
NJIT[2]	-	-	-	-
RUTGERS UNIVERSITY	3	1	26	0
COMMUNITY COLLEGES				
Atlantic	48	54	38	46
Bergen	62	60	57	52
Brookdale	39	47	44	47
Burlington	78	55	23	42
Camden	31	29	37	36
Cumberland	31	32	23	28
Essex	80	86	-[4]	85
Gloucester	36	35	45	-[5]
Hudson	71	52	12	32
Mercer	34	29	39	25
Middlesex	33	33	28	25
Morris	27	21	28	30
Ocean	22	35	30	-[4]
Passaic	82	89	54	85
Salem	41	47	37	27
Somerset[1]	-	-	-	-
Union	30	13	29	19
UCTI	28	42	25	-[4]

[1] Kean College, Trenton State College, Somerset County College, and certain units of Rutgers include basic math in their Algebra courses; Stockton State College's "Other Math" includes both basic math and algebra: data from these colleges are included in Table 10.

[2] NJIT's remedial math program begins at the level of trigonometry and thus is not included in Table 8 or 10. Of those students tested the following students were identified as needing remedial math (i.e., trigonometry): Fall 1980 - F.T. 223 (35%), P.T. 4 (80%); Fall 1981 - F.T. 224 (33%), P.T. 5 (42%).

[3] 1980 data not available.

[4] Institution did not differentiate between full- and part-time students.

[5] Gloucester County College did not test any part-time students in Fall, 1981.

NOTE: The percentages of students identified as needing remediation may vary for two reasons: (1) student population and or (2) placement criteria.

TABLE 9

Comparison of the Number and Percentage of Tested Students Who Were Identified as Needing Remediation in Elementary Algebra[1]
By Sector
Fall, 1980 - Fall, 1981

STUDENTS		COMMUNITY COLLEGES[1]		STATE COLLEGES[2]		RUTGERS/ NJIT[3]		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981[4]
FULL	N	6,646	5,571	2,970	3,427	292	458	9,908	9,456
TIME	%	47	38	45	45	5	7	37	32
	% RANGE	95 - 3	91 - 6	88 - 27	73 - 29	--	--	95 - 3	91 - 6
PART	N	1,686	2,325	530	683	296	316	2,512	3,324
TIME	%	51	41	49	45	51	78	50	44
	% RANGE	96 - 13	90 - 4	82 - 25	79 - 6	--	--	96 - 13	90 - 4
	% MEDIAN	54	38	43	57	--	--	53	48

[1] 1980 data on Algebra is not included for the following institutions: Burlington County College - not available; Glassboro State College, Atlantic and Ocean County Colleges - remedial algebra not offered; Brookdale and Gloucester County Colleges - remedial algebra not required; Montclair State College - not offered at this time. 1981 data on Algebra not included for the following institutions: Atlantic Brookdale, Ocean, and Passaic County Colleges - remedial Algebra not required; Glassboro - remedial Algebra not offered (will be as of Fall, 1982).

[2] Essex (1980 and 1981) and Stockton (1980 and 1981) do not separate full and part-time students identified as needing remediation; all students are included in full-time figures for their respective sectors.

[3] NJIT's remedial math program begins at the level of trignonometry and thus is not included in Tables 7 or 9. Of those students tested the following students were identified as needing remedial math (i.e, trigonometry): Fall 1980: F.T. 223 (35%), P.T. 4 (80%); Fall 1981 - F.T. 224 (33%), P.T. 5 (42%).

[4] Some colleges did not require remediation in algebra for any of their students, and some colleges required remediation only for students in certain majors (see Table 14). If all colleges remediated every student falling below their placement criteria in algebra (regardless of major or college policy), the State Total would increase to 15,720 for full-time students (an increase of 6,264) and 5,606 for part-time students (an increase of 2,282). This figure is still understated since Atlantic and Ocean County Colleges and Glassboro State College did not establish placement criteria in Fall, 1981 and, therefore, did not identify students with skills deficiencies in algebra.

TABLE 10

Comparison of the Percentage of Tested Students Who Were Identified as Needing Remediation in Elementary Algebra, By College

Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
STATE COLLEGES	1980	1981[1]	1980	1981[1]
Glassboro State College[2]	-	-	-	-[7]
Jersey City State College	88	29 (87)	84	24 (77)
Kean College of New Jersey	10	45	22	66
Montclair State College[4]	-[4]	46 (73)	-[4]	63 (87)
Ramapo College of New Jersey	80	65	33	51
Richard Stockton State College	32	29	-[5]	-[5]
Trenton State College	58	58	82	79
Wm. Paterson College of NJ	27	29 (76)	25	6
Thomas A. Edison State College	-[6]	-	-[6]	73
NJIT[3]	-	-	-	-
RUTGERS UNIVERSITY		7		78
COMMUNITY COLLEGES				
Atlantic	-	-[7]	-	-[7]
Bergen	95	70 (98)	96	80 (100)
Brookdale	-[7]	-[7] (67)	-[7]	-[7] (41)
Burlington	-[6]	39 (90)	-[6]	38 (89)
Camden	67	46 (46)	82	54
Cumberland	37	47 (62)	26	46 (79)
Essex	63	91	-[5]	90
Gloucester	-[7]	18	-[7]	-[8]
Hudson	25	6	13	4
Mercer	53	50	72	50
Middlesex	3	8 (50)	0	- (65)
Morris	26	27 (86)	30	17 (70)
Ocean	-	-[7]	-	-[7]
Passaic	95	-[7] (97)	78	-[7] (96)
Salem	48	26 (42)	69	48
Somerset	37	21 (40)	53	34
Union	38	17	54	29
UCTI	26	62	27	-[5]

[1] 1981 data include those students falling below institutional placement criteria who are required to take elementary algebra. Percentages in parenthesis ( ) include all students identified as falling below institutional placement criteria, regardless of major or college policy.

[2] Remedial algebra was not offered at Glassboro State College. A course will be offered beginning Fall, 1982.

[3] NJIT's remedial math program begins at the level of trigonometry.

[4] Remedial algebra was not offered at Montclair in Fall, 1980.

[5] Institution did not differentiate between full- and part-time students.

[6] 1980 data not available.

[7] Students were not identified as needing remediation in algebra since such remediation was not required and no placement criteria was established.

[8] Gloucester County College did not test any part-time students in Fall, 1981.

NOTE: The percentage of students identified as needing remediation may vary for two reasons: (1) student population and/or (2) placement criteria.

TABLE 11

Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Reading[1] By College

Fall, 1980 - Fall, 1981

COMMUNITY COLLEGES	PERFORMANCE CRITERIA	
	FALL 1980	FALL 1981
Atlantic Community College	RC < 161	RC < 164
Bergen Community College	RC, SS, LR < 161 Average	RC, SS, LR < 161 Average
Brookdale Community College	RC < 161	RC < 160
Burlington Community College	TE < 163	RC < 164 (Scores of 164-171 are considered for remediation)
Camden County College	TE < 163	TE < 163
Cumberland County College	RC < 163	RC < 163
Essex County College	RC < 159	RC < 159
Gloucester County College	TE < 163, ACT ≤ 13 or SAT < 350	TE < 163
Hudson CCC Commission	RC < 154	RC < 154
Mercer County Comm. College	TE < 157	RC < 163
Middlesex County College	RC < 155	RC < 155[2]
Morris, County College of	RC < 160, Essay < 7	RC < 163, Essay < 7
Ocean County College	RC < 161	RC < 161
Passaic County Comm. College	RC < 163, LR < 162	LR < 159 or LR < 167, RC < 157
Salem Community College	RC, LR < 60 correct of 90 Items	RC, LR < 60 correct of 90 Items
Somerset County College	RC < 156	RC < 154
Union College	RC < 168, LR 168	RC < 164
UCTI	RC < 163	RC < 167
STATE COLLEGES		
Glassboro State College	RC < 170	RC < 167
Jersey City State College	RC, LR < 166 Average	RC < 157, LR < 136
Kean College of NJ	RC < 170	RC < 166
Montclair State College	RC < 163	RC < 166
Ramapo College of NJ	RC < 171	RC < 173
Stockton State College	RC, LR < 167 or RC, LR > 167, Essay 6	Sum of 74 (out of 90) correct on RC & LR, Essay < 8
Trenton State College	RC < 168, SS 169, LR < 166	RC < 167
Wm. Paterson College of NJ	TC, TE < 166, RC < 176	RC < 162, SS < 163, LR < 161
Thomas A. Edison State Coll.	Data Not Available	
NJIT	Essay < 7, RC < 160, TC < 163, SAT < 400, TSWE < 40	Essay < 7, RC < 163, TC < 163 SATV < 400, SATMC < 40 TSWE < 40
RUTGERS UNIVERSITY		
Camden C.A.S.	NJCBSPT 40th Percentile. McGraw-Hill Form A 50th Percentile	NJCBSPT 40th percentile McGraw-Hill Reading Test 50th Percentile
Newark C.A.S.	SS < 162, SAT < 400, H.S. Rank < Top 50%	SS < 162, SAT < 400, H.S. Rank < Top 50%.
Nursing, College of	Same as Above (NCAS)	See Newark C.A.S. (above)
Cook College	RC < 160	Faculty evaluation of test scores.
Douglass College	TE < 166, McGraw-Hill 22nd Percentile	TE < 167 SATV < 18th Percentile
Engineering, College of	See Livingston & Rutgers Colleges	TE < 167, SATV < 460
Livingston College	TE < 166, McGraw-Hill 34th Percentile	TE < 166, McGraw-Hill 34th Percentile
Pharmacy, College of	SAT < 400	Evaluation by department
Rutgers College	TE < 166, SATV < 460	TE < 168, SATV < 460
University College	EOF only: poor performance in summer course	See Newark C.A.S.

RC = Reading Comprehension
SS = Sentence Structure
LR = Logical Relationships
TC = Total Composition
TE = Total English
MC = Math Computation
El. Al. = Elementary Algebra
H.S. = High School

---

[1] Unless otherwise noted, performance criteria refers to the NJCBSPT.

[2] Standards have been raised for 1982-83 (RC < 161).

TABLE 11

Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Writing By College

Fall, 1980 - Fall, 1981

COMMUNITY COLLEGES	PERFORMANCE CRITERIA	
	FALL 1980	FALL 1981
Atlantic Community College	SS ≤160	SS ≤165
Bergen Community College	RC, SS, LR ≤160 Average	RC, SS, LR ≤161 Average
Brookdale Community College	SS ≤159	SS ≤161
Burlington Community College	Essay evaluated by English Faculty	Essay evaluated by English Faculty
Camden County College	TC ≤163, Essay ≤7	Composition ≤165
Cumberland County College	SS ≤163	SS ≤163
Essex County College	SS ≤157, Essay ≤9 (local scoring)	SS ≤158, Essay ≤9 (local scoring)
Gloucester County College	TE ≤163, ACT ≤13, SAT ≤350	TE ≤163
Hudson CCC Commission	SS ≤156	SS ≤156
Mercer County Comm. College	TE ≤159	TC ≤159, In-house review of essay[2]
Middlesex County College	SS ≤154	SS ≤154[3]
Morris, County College of	TC ≤163, SATV ≤350, H.S. English ≤C	TC ≤163, SATV ≤350, H.S. English ≤C
Ocean County College	SS ≤163/Various Essay Scores	SS ≤163/Various Essay Scores
Passaic County Comm. College	SS 159-180, LR 159-180, Essay ≤9	SS ≤183, LR ≤159, Essay ≤9
Salem Community College	SS ≤154, LR ≤20 correct of selected 25 Items	LR ≤21 correct of selected 25 Items
Somerset County College	SS, LR ≤160 Average	SS, LR ≤161 Average
Union College	SS ≤153 or SS 153-162 with evaluation of essay	SS ≤156
UCTI	SS ≤154	SS ≤153
STATE COLLEGES		
Glassboro State College	TE ≤163	TE ≤163
Jersey City State College	In-house evaluation of essay	In-house evaluation of essay
Kean College of NJ	Essay ≤7 or Essay=7, SS ≤163/LR ≤163	Essay ≤7 or Essay=7 SS ≤165 or LR ≤165
Montclair State College	In-house writing sample	TC 160-164, Essay ≤8
Ramapo College of NJ	TC ≤169, Essay ≤9	TC ≤169, Essay ≤9
Stockton State College	Essay ≤7 or Essay=7, LR ≤166	Essay ≤7 or Essay=7, LR ≤165
Trenton State College	Essay ≤8	Essay ≤7
Wm. Paterson College of NJ	TC, TE ≤160, SS ≤165, Essay ≤7	Essay ≤7 or Essay=7, SS ≤167
Thomas A. Edison State Coll.	Data Not Available	TC ≤164
NJIT	Essay ≤7, RC ≤160, TC ≤163, SAT ≤400, TSWE ≤40	Essay ≤7, RC ≤163, TC ≤165, SATV ≤400, SATMC ≤40, TSWE ≤400
RUTGERS UNIVERSITY		
Camden C.A.S.	TE ≤166, Houghton Mifflin Placement Test: Total 130, In-house evaluation of locally developed essay	TE ≤166 Faculty developed placement test
Newark C.A.S.	SS ≤162, SAT ≤400 H.S. Rank ≤Top 50%.	SS ≤162, SAT ≤400, H.S. Rank ≤Top 50%.
Nursing, College of	Same as above (NCAS)	See Newark C.A.S. (above)
Cook College	Essay ≤6	Faculty evaluation of test scores
Douglass College	Instructor's evaluation of locally developed test.	Faculty developed placement test
Engineering, College of	See Livingston and Rutgers Colleges	See Rutgers College
Livingston College	Instructor's evaluation to succeed	Faculty developed placement test
Pharmacy, College of	SATV ≤400	Evaluation by department
Rutgers College	TE ≤166, Verbal ≤440	TE ≤166, SAT V ≤440
University College	SS ≤160 (Camden, Newark); SS ≤164, essay evaluation (New Brunswick)	See Newark C.A.S.

RC = Reading Comprehension
SS = Sentence Structure
LR = Logical Relationships
TC = Total Composition

TE = Total English
MC = Math Computation
El. Al. = Elementary Algebra
H.S. = High School

[1] Unless otherwise noted, performance criteria refers to the NJCBSPT.

[2] Standards have been raised for 1982-83 (SS ≤163; or 155 > SS ≤163 and Essay ≤8).

[3] Standards have been raised for 1982-83 SS ≤ 161).

TABLE 13

Comparison of the Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Math Computation[1] By College Fall, 1980 - Fall, 1981

COMMUNITY COLLEGES	PLACEMENT CRITERIA	
	FALL 1980	FALL 1981
Atlantic Community College	MC ≤ 161	MC ≤ 164
Bergen Community College	MC ≤ 163	MC ≤ 163
Brookdale Community College	MC ≤ 162	MC ≤ 162
Burlington Community College	MC ≤ 168	MC ≤ 167
Camden County College	MC ≤ 163	MC ≤ 164
Cumberland County College	MC ≤ 157	MC ≤ 156 H.S. Grade
Essex County College	MC ≤ 167	MC ≤ 166
Gloucester County College	MC ≤ 171, ACT ≤ 13, SAT ≤ 330	MC ≤ 163
Hudson CCC Commission	MC ≤ 162	MC ≤ 162
Mercer County Comm. College	MC ≤ 157	MC ≤ 137 [2]
Middlesex County College	MC ≤ 158	MC ≤ 158 [3]
Morris, County College of	MC ≤ 166, SATM ≤ 325, H.S. Math ≤ C	SAT MC ≤ 165, SATM ≤ 325, H.S. Grade H.S. Math ≤ C
Ocean County College	MC ≤ 156	MC ≤ 156
Passaic County Comm. College	MC ≤ 137	MC ≤ 137
Salem Community College	MC ≤ 14 correct of selected 20 items	MC ≤ 14 correct of selected 20 items
Somerset County College[4]	— —	— —
Union College	MC ≤ 137 or MC 157-162 with El. Al. ≤ 159	MC ≤ 137
UCTI	MC=161	MC ≤ 163
STATE COLLEGES		
Glassboro State College	MC & El. Al. ≤ 336 and MC ≤ 170	Combined MC & El. Al. ≤ 336 and MC ≤ 170
Jersey City State College	MC ≤ 163	MC ≤ 163.
Kean College of NJ	— —	— —
Montclair State College	MC ≤ 170	MC ≤ 163
Ramapo College of NJ	MC ≤ 133	MC ≤ 133
Stockton State College[4]	— —	— —
Trenton State College	MC ≤ 169	MC ≤ 171
Wm. Paterson College of NJ	MC ≤ 164 or ≤ 167 depending on major	MC ≤ 167
Thomas A. Edison State Coll.	Data Not Available	MC ≤ 163
NJIT[5]	— —	— —
RUTGERS UNIVERSITY		
Camden C.A.S.	MC ≤ 162	MC ≤ 164, El Al ≤ 163
Newark C.A.S	MC ≤ 157	MC ≤ 164
Nursing, College of	— —	See Newark C.A.S. (above)
Cook College	≤ 10 of 13 correct on College Placement Test	Faculty developed test
Douglass College	H.S. Deficiency	H.S. Deficiency
Engineering, College of	See Livingston and Rutgers College	See Rutgers College
Livingston College	MC covered in Algebra course	H.S. Deficiency
Pharmacy, College of	MC ≤ 176	Evaluation of tests by faculty
Rutgers College	MC ≤ 176	MC ≤ 176
University College	MC ≤ 171 (Camden); course not offered at Newark and New Brunswick	MC ≤ 167

RC = Reading Comprehension
SS = Sentence Structure
LR = Logical Relationships
TC = Total Composition

TE = Total English
MC = Math Computation
El. Al. = Elementary Algebra
H.S. = High School

---

[1] Unless otherwise noted, performance criteria refers to the NJCBSPT.

[2] Standards have been raised for 1982-83 (MC ≤ 160).

[3] Standards have been raised for 1982-83 (MC ≤ 163).

[4] Kean College, Trenton State College, Somerset County College, and certain units of Rutgers include basic math in the Algebra courses; Stockton State College's "Other Math" includes both basic math and algebra; data from these colleges are included in Table 14.

[5] NJIT's remedial math program begins at the level of trigonometry. Placement criteria for this course is given on Table 14.

TABLE 14

Comparison of the Placement Criteria Used by the Colleges in Placing Students in Need of Remediation in Elementary Algebra
By College
Fall, 1980 - Fall, 1981

COMMUNITY COLLEGES	PERFORMANCE CRITERIA[1]	
	Fall, 1980	Fall, 1981
Atlantic Community College	Remedial Course not Offered	2 Remedial Course not Offered
Bergen Community College	El. Al.≤171	*El. Al. ≤176
Brookdale Community College	Criteria Not Reported	*El. Al. ≤169
Burlington Community College	El. Al.≤178	*El. Al.≤ 179
Camden County College	El. Al.≤174	*El. Al.≤175
Cumberland County College	MC≥136, El. Al. 167	*MC≥136, El. Al.≤167
Essex County College	MC≥167, El. Al.≤161	**MC = 167, El. Al.≤161
Gloucester County College	Criteria Not Reported	* one yr. of H.S. Algebra
Hudson CCC Commission	El. Al.≤163	*El. Al.≤163
Mercer County Comm. College	MC≥158, El. Al.≤168	*MC ≥158, El. Al.≤169 3
Middlesex County College	El. Al.≤161	*El. Al.≤161
Morris, County College of	El. Al.≤171, SATM≤400, H.S. Math≤C	*El. Al.≤171, SATM≤400, H.S. Al. or Geom.≤C
Ocean County College	Remedial Course not offered	2 Remedial Course not offered
Passaic County Comm. College	El. Al.≤168	2 El. Al. ≤168
Salem Community College	El. Al.≤14 correct of selected 20 items	**El. Al. ≤14 correct of selected 20 items
Somerset County College	El. Al.≤160	**El. Al.≤160
Union College	El. Al.≤155 or El. Al.≤157-158 & MC 157-162	**El. Al.≤159
UCTI	El. Al.≤161	**El. Al.≤163
STATE COLLEGES		
Glassboro State College	Remedial Course not offered	2 Remedial Course not offered
Jersey City State College	MC 163-169, El. Al.≤173	*MC 166-180, El. Al.≤176
Kean College of NJ	El. Al.≤174	**El. Al.≤174
Montclair State College	Remedial Course not offered	*El. Al.≤181
Ramapo College of NJ	MC≤172, El. Al.≤182	**MC ≤166-172 or El. Al.≤180
Stockton State College	MC≤166	**MC≤167 or MC=167, El. Al.≤180
Trenton State College	El. Al.≤175	**El. Al.≤177
Wm. Paterson College of NJ	El. Al.≤174	*El. Al.≤174, MC≤166
Thomas A. Edison State Coll.	Data Not Available	El. Al.≤166
NJIT (Remediation starts at level of trigonometry)	El. Al.≤180, SATM≤510, Math Level I Achievement Test≤510, NJIT Math Test≤14	2 El. Al.≤182, SATM≤510, Math Level I Achievement Test≤510, NJIT Math Test≤14
RUTGERS UNIVERSITY		
Camden C.A.S.	El. Al.≤161	MC ≤164, El. Al.≤163
Newark C.A.S.	MC≤163, El. Al.≤166	MC ≤164, El. Al.≤163
Nursing, College of	Same as above (NCAS)	See Newark C.A.S. (above)
Cook College	≤10 of 33 correct on College Placement Test	Faculty developed test
Douglass College	H.S. Deficiency	H.S. Deficiency
Engineering, College of	See Livingston and Rutgers College	See Rutgers College
Livingston College	El. Al.≤173	H.S. Deficiency
Pharmacy, College of	College Entrance Requirement	Faculty evaluation
Rutgers College	College Entrance Requirement	College Entrance Requirement
University College	El. Al.≤166 (Camden); H.S. Record (Newark); ≤190 on combined Math Tests	El. Al.≤158

RC = Reading Comprehension
SS = Sentence Structure
LR = Logical Relationships
TC = Total Composition

TE = Total English
MC = Math Computation
El. Al. = Elementary Algebra
HS = High School

[1] Unless otherwise noted, performance criteria refers to the NJCBSPT.

* Remediation required for certain majors only

49

** Remediation required for all students.

2 Remediation not required.

3 Remediation will be offered beginning in Fall, 1981.

Table 15

Comparison of the Number and Percentage of Students Identified by the Colleges as Needing Remediation with the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

COMMUNITY COLLEGES, FALL 1981

	(1) Lack Proficiency		(2) Lack Proficiency in Some Areas[1]		Total (1 + 2)		Students Identified by the College as Needing Remediation		
	#	%	#	%	#	%	#	%	
Reading							8,113	33	
VERBAL[2]	12,666	42	11,891	40	24,557	82			(32% Average)[3]
Writing							7,515	31	
COMPUTATION	16,795	56	7,368	25	24,163	80	9,480	39	
ELEMENTARY ALGEBRA	23,451	78	5,450	18	28,901	96	7,896[4]	39[4]	

---

[1] "While some of these students may be able to perform well in first-year college courses, in the Council's opinion many may not, and colleges must examine their academic standards and placement systems carefully before assuming that these students are prepared in the basic skills." Basic Skills Council Report to the Board of Higher Education, December, 1980.

[2] The Basic Skills Council identified proficiency in verbal skills and did not differentiate between reading and writing.

[3] An average is given since some students may be included once in reading and then again in writing. Adding the two categories would result in duplicated numbers. Since the Basic Skills Council did not differentiate between reading and writing, the data they report is unduplicated (i.e. a student deficient in both reading and writing is counted once as being deficient in "verbal" skills).

[4] Includes only those students identified by the colleges as requiring remediation in elementary algebra. Data does not include Atlantic, Brookdale, Ocean and Passaic County Colleges since remediation in algebra is not required at these institutions.

Table 16

Comparison of the Number and Percentage of Students Identified by the Colleges as Needing Remediation with the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

STATE COLLEGES, FALL 1981

	(1) Lack Proficiency		(2) Lack Proficiency in Some Areas[1]		Total (1 + 2)		Students Identified by the Colleges as Needing Remediation	
	#	%	#	%	#	%	#	%
VERBAL[2] Reading	2,232	22	4,660	45	6,892	64	3,189	31 (35% Average)[3]
Writing							3,851	38
COMPUTATION	3,454	33	3,190	31	6,644	64	2,182	21
ELEMENTARY ALGEBRA	5,160	50	4,126	40	9,286	90	4,110[4]	46[4]

---

[1] "While some of these students may be able to perform well in first-year college courses, in the Council's opinion many may not, and colleges must examine their academic standards and placement systems carefully before assuming that these students are prepared in the basic skills." Basic Skills Council Report to the Board of Higher Education, December, 1980.

[2] The Basic Skills Council identified proficiency in verbal skills and did not differentiate between reading and writing.

[3] An average is given since some students may be included once in reading and then again in writing. Adding the two categories would result in duplicated numbers. Since the Basic Skills Council did not differentiate between reading and writing, the data they report is unduplicated (i.e. a student deficient in both reading and writing is counted once as being deficient in "verbal" skills).

[4] Includes only those students identified by the colleges as requiring remediation in elementary algebra. Data does not include Glassboro State College since remediation in algebra was not required and a remedial course in algebra was not offered (will be offered as of Fall, 1982).

Table 17

Comparison of the Number and Percentage of Students Identified by the Colleges as Needing Remediation with the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

RUTGERS UNIVERSITY, FALL 1981

	(1) Lack Proficiency		(2) Lack Proficiency in Some Areas[1]		Total (1 + 2)		Students Identified by the University as Needing Remediation	
	#	%	#	%	#	%	#	%
Reading							814	12
VERBAL[2]	617	9	2,275	35	2,892	44		(16% Average)[3]
Writing							1,376	20
COMPUTATION	991	15	1,356	21	2,347	36	35	1
ELEMENTARY ALGEBRA[3]	1,260	19	2,797	43	4,057	62	774	11

---

[1] "While some of these students may be able to perform well in first-year college courses, in the Council's opinion many may not, and colleges must examine their academic standards and placement systems carefully before assuming that these students are prepared in the basic skills." Basic Skills Council Report to the Board of Higher Education, December, 1980.

[2] The Basic Skills Council identified proficiency in verbal skills and did not differentiate between reading and writing.

[3] An average is given since some students may be included once in reading and then again in writing. Adding the two categories would result in duplicated numbers. Since the Basic Skills Council did not differentiate between reading and writing, the data they report is unduplicated (i.e. a student deficient in both reading and writing is counted once as being deficient in "verbal" skills).

Table 18

Comparison of the Number and Percentage of Students Identified by the Colleges as Needing Remediation with the Number and Percentage Identified by the Basic Skills Council as Lacking Proficiency and Lacking Proficiency in Some Areas

NJIT, FALL 1981

	(1) Lack Proficiency		(2) Lack Proficiency in Some Areas[1]		Total (1 + 2)		Students Identified by the College as Needing Remediation	
	#	%	#	%	#	%	#	%
VERBAL[2]	94	14	289	42	383	56	158	23
COMPUTATION	34	5	86	13	120	18	229[3]	33[3]
ELEMENTARY ALGEBRA	21	3	273	40	294	43		

---

[1] "While some of these students may be able to perform well in first-year college courses, in the Council's opinion many may not, and colleges must examine their academic standards and placement systems carefully before assuming that these students are prepared in the basic skills." Basic Skills Council Report to the Board of Higher Education, December, 1980.

[2] The Basic Skills Council identified proficiency in verbal skills and did not differentiate between reading and writing.

[3] Math remediation begins at the level of trigonometry.

TABLE 19

Comparison of the Number and Percentage* of Students Enrolled in Remediation in Reading

By Sector
Fall, 1980 - Fall, 1981

STUDENTS		COMMUNITY COLLEGES		STATE COLLEGES[2]		RUTGERS/ NJIT		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981
FULL	N	5,879[1]	5,297	2,502[3]	2,339	847	1,004	9,228	8,640
TIME	%	80	83	82	85	80	94	81	85
	% RANGE	100 - 40	100 - 48	100 - 62	100 - 0	100 - 79	100 - 93	100 - 40	100 - 0
PART	N	749	1,075	254	271	15	25	1,018	1,371
TIME	%	53	62	54	63	33	86	53	63
	% RANGE	100 - 10	100 - 10	100 - 35	94 - 42	—	—	100 - 10	100 - 10

*Of those identified by the colleges as needing remediation in Reading.

[1] Essex did not separate full and part-time students; all students are included in full-time figures.

[2] Stockton does not separate full-time and part-time students; all students are included in full-time figures.

[3] William Paterson did not separate full and part-time enrollment; all students are included in full-time figures.

TABLE 20

Comparison of the Percentage* of Students Enrolled in Remediation in Reading, By College

Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
	1980	1981	1980	1981
STATE COLLEGES				
Glassboro State College	95	96	76	59
Jersey City State College	62	73	35	59
Kean College of New Jersey	76	81	68	54
Montclair State College	69	89	49	53
Ramapo College of New Jersey	92	98	71	94
Richard Stockton State College	100	100	–[1]	–[1]
Trenton State College	100	93	100	42
Wm. Paterson College of NJ	90	66	–[1]	77
Thomas A. Edison State College	–[2]	–	–[2]	0
NJIT	100	100	–[3]	–[3]
RUTGERS UNIVERSITY	79	93	33	86
COMMUNITY COLLEGES				
Atlantic	89	84	39	68
Bergen	73	99	39	65
Brookdale	84	93	61	80
Burlington	93	85	43	36
Camden	84	92	58	59
Cumberland	71	76	49	43
Essex	87	87	–[1]	88
Gloucester	47	87	97	–[4]
Hudson	100	100	100	100
Mercer	77	68	57	50
Middlesex	77	69	35	24
Morris	100	99	100	93
Ocean	78	48	15	–[1]
Passaic	92	84	58	54
Salem	81	70	92	25
Somerset	89	58	31	28
Union	40	87	10	28
UCTI	96	61	100	–[1]

*Of those identified by the colleges as needing remediation in Reading.

[1] Institution did not differentiate between full- and part-time students.

[2] 1980 data not available.

[3] No part-time students were identified as needing remediation.

[4] Gloucester County College did not test any part-time students in Fall, 1981.

TABLE 21

Comparison of the Number and Percentage* of Students Enrolled in Remediation in Writing[1]
By Sector
Fall, 1980 - Fall, 1981

	STUDENTS	COMMUNITY COLLEGES		STATE COLLEGES		RUTGERS/ NJIT		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981
FULL TIME	N	5,202[2]	5,245[3]	4,263[2]	2,937[3]	931	1,151	10,396	9,333
	%	88	89	96	89	86	96	91	90
	% RANGE	100 - 51	100 - 72	100 - 88	100 - 0	100 - 84	100 - 95	100 - 51	100 - 0
PART TIME	N	1,372	1,052	453	466	48	42	1,873	1,560
	%	96	65	73	82	27	100	84	70
	% RANGE	100 - 5	100 - 24	100 - 52	96 - 42	--	--	100 - 5	100 - 24

*Of those identified by the colleges as needing remediation in Writing.

[1] Bergen, Essex and some units of Rutgers University offer Reading & Writing in the same course. Figures for those courses are included in Table 19

[2] Stockton, William Paterson and Essex did not differentiate full-time and part-time enrollment; all students are included in full-time for their respective sectors.

[3] Stockton, Ocean and UCTI did not differentiate between full- and part-time students; all students are included in full-time for their respective sectors.

TABLE 22

Comparison of the Percentage* of Students Enrolled in Remediation in Writing, By College

Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
STATE COLLEGES	1980	1981	1980	1981
Glassboro State College	96	93	83	42
Jersey City State College	96	98	80	92
Kean College of New Jersey	88	87	79	70
Montclair State College	99	91	52	80
Ramapo College of New Jersey	93	96	82	78
Richard Stockton State College	100	100	–[1]	–[1]
Trenton State College	100	96	100	91
Wm. Paterson College of NJ	89	78	–[1]	96
Thomas A. Edison State College	–[2]	–	–[2]	0
NJIT	100	100	–[3]	–[3]
RUTGERS UNIVERSITY	84	95	27	100
COMMUNITY COLLEGES				
Atlantic	92	81	65	58
Bergen[5]	–	–	–	–[5]
Brookdale	92	95	63	76
Burlington	97	81	89	24
Camden	90	94	60	59
Cumberland	88	90	79	67
Essex	94	94	–[4]	87
Gloucester	94	93	77	–[5]
Hudson	100	100	100	100
Mercer	77	72	62	52
Middlesex	94	80	94	31
Morris	92	96	87	83
Ocean	51	86	5	–[1]
Passaic	89	91	79	66
Salem	92	85	100	33
Somerset	98	74	30	45
Union	52	86	18	49
UCTI	85	91	89	–[1]

*Of those identified by the colleges as needing remediation in Writing.

[1] Institution did not differentiate between full- and part-time students.

[2] 1980 data not available.

[4] No part-time students were identified as needing remediation.

[6] Bergen, Essex and some units of Rutgers offer Reading and Writing in the same course. Figures are included in Table 20.

[5] Gloucester County College did not test any part-time students in Fall, 1981.

TABLE 23

Comparison of the Number and Percentage* of Students Enrolled in Remediation in Math Computation[1]
By Sector
Fall, 1980 - Fall, 1981

	STUDENTS	COMMUNITY COLLEGES [2]		STATE COLLEGES [2]		RUTGERS/ NJIT [3]		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981
FULL TIME	N	5,676	5,733	1,807	1,520	116	35	7,599	7,277
	%	71	79	86	84	59	100	74	80
	% RANGE	100 - 34	100 - 53	98 - 72	100 - 0	--	--	100 - 34	100 - 0
PART TIME	N	995	1,305	172	223	96	--	1,263	1,528
	%	53	57	52	61	62	--	54	57
	% RANGE	100 - 7	100 - 30	83 - 41	100 - 50	--	--	100 - 7	100 - 30

---

*Of those identified by the colleges as needing remediation in Computation.

[1] Somerset, Kean and certain units of Rutgers include basic math in their algebra courses; Stockton's "Other Math" includes both basic math and algebra; Trenton State College reports math and algebra together; data from these colleges are included in Table 25.

[2] Essex (1980 only), Stockton (1980 and 1981) and William Paterson (1980 only) do not differentiate full-time and part-time enrollment. All students are included under full-time in their respective sectors.

[3] NJIT's remedial math program begins at the level of trigonometry and thus is not included in Table 23.

TABLE 24

Comparison of the Percentage* of Students Enrolled in Remediation in Math Computation, By College

Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
STATE COLLEGES	1980	1981	1980	1981
Glassboro State College	95	96	83	66
Jersey City State College	83	80	53	56
Kean College of New Jersey[1]	-	-	-	-
Montclair State College	72	90	41	50
Ramapo College of New Jersey	93	100	56	100
Richard Stockton State College[1]	-	-	-	-
Trenton State College[1]	-	-	-	-
Wm. Paterson College of NJ	98	73	-	92
Thomas A. Edison State College	-[3]	-	-[3]	0
NJIT[2]	-	-	-	-
RUTGERS UNIVERSITY	59	100	62	-
COMMUNITY COLLEGES				
Atlantic	89	74	43	48
Bergen	51	82	26	52
Brookdale	67	53	49	50
Burlington	71	82	84	58
Camden	75	79	41	53
Cumberland	123	76	27	30
Essex	82	89	-	81
Gloucester	58	96	91	-[5]
Hudson	100	100	100	100
Mercer	75	81	56	62
Middlesex	58	76	44	40
Morris	85	92	100	92
Ocean	52	71	7	-[4]
Passaic	98	95	90	60
Salem	83	73	100	35
Somerset[1]	-	-	-	-[4]
Union	34	58	9	35
UCTI	87	85	84	-[4]

*Of those identified by the colleges a needing remediation in Computation.

[1] Somerset, Kean and certain units of Rutgers include basic math in their algebra courses; Stockton's "Other Math" includes both basic math and algebra; Trenton State College reports math and algebra together; data from these colleges are included in Table 25.

[2] NJIT's remedial math program begins at the level of trigonometry.

[3] 1980 data not available.

[4] Institution did not differentiate between full- and part-time students.

[5] Gloucester County College did not test any part-time students in Fall, 1980.

TABLE 25

Comparison of the Number and Percentage* of Students Enrolled in Remediation in Elementary Algebra[1]
By Sector
Fall, 1980 - Fall, 1981

STUDENTS		COMMUNITY COLLEGES[2]		STATE COLLEGES[2]		RUTGERS/ NJIT[3]		STATE TOTAL	
		1980	1981	1980	1981	1980	1981	1980	1981[5]
FULL	N	2,891	3,264	2,426	2,687	201	438	5,518	6,389
TIME	%	44	59	80	78	69	96	55	68
	% RANGE	100 - 8[4]	100 - 9	100 - 29	100 - 0	—	--	100 - 8	100 - 0
PART	N	485	806	172	381	248	111	905	1,298
TIME	%	29	35	38	56	84	35	37	39
	% RANGE	100 - 4	96 - 0	100 - 17	100 - 32	--	—	100 - 4	100 - 0
	% MEDIAN	45[4]	28.5	51	59	—	--	47.5	30

*Of those identified by college as requiring remediation in Elementary Algebra.

[1] Data on algebra is not included for the following institutions: Glassboro State College, Atlantic and Ocean County Colleges - remedial algebra not offered.

[2] Essex, Stockton and William Paterson do not differentiate full-time and part-time enrollment. All students are included under full-time in their respective sectors.

[3] NJIT's remedial math program begins at the level of trigonometry and thus is not included in Table 25.

[4] Burlington County College is not included in % range since they do not identify all students needing remediation in algebra.

[5] The percentage of students enrolled in remediation in elementary algebra is inflated, since they are based on those students "requiring" remediation as defined by the colleges. Some colleges did not require remediation in algebra for any students and some colleges required remediation only for students in certain majors (see Table 14). If all colleges remediated every student falling below their placement criteria, enrollment percentages for the State would be 41% for full-time students and 23% for part-time students.

TABLE 26

Comparison of the Percentage* of Students Enrolled in Remediation in Elementary Algebra by College Fall, 1980 - Fall, 1981

	Full-Time		Part-Time	
STATE COLLEGES	1980	1981	1980	1981
Glassboro State College[1]	-	-	-	-
Jersey City State College	29	84	17	79
Kean College of New Jersey	66	87	42	65
Montclair State College	-[2]	81	-[2]	48
Ramapo College of New Jersey	100	100	100	100
Richard Stockton State College	100	100	-[3]	-[3]
Trenton State College	98	90	48	32
Wm. Paterson College of NJ	87	72	-	53
Thomas A. Edison State College	-[4]	-	-[4]	0
NJIT[5]	-	-	-	-
RUTGERS UNIVERSITY	69	96	84	35
COMMUNITY COLLEGES				
Atlantic[1]	-	-	-	-
Bergen	15	44	4	26
Brookdale	-	45	-	22
Burlington	-	46	-	29
Camden	35	76	22	43
Cumberland	89	100	73	96
Essex	63	32	-	0
Gloucester	-	100	-	-[6]
Hudson	100	-	100	-
Mercer	58	24	45	22
Middlesex	49	86	-	-
Morris	87	92	100	94
Ocean[1]	-	-	-	-
Passaic	8	9	8	5
Salem	36	90	51	70
Somerset	67	76	22	38
Union	17	92	8	28
UCTI	83	24	90	-[3]

*Of those identified by the colleges as requiring remediation in elementary algebra. Some colleges did not require remediation in elementary algebra for any of their students, while others required it only for students in certain majors (see Table 14). The percentages in many cases, therefore, are inflated.

[1] Institution did not offer remedial algebra in Fall, 1981. A course will be offered beginning Fall, 1982.

[2] Remedial algebra was not offered at Montclair in Fall, 1980.

[3] Institution does not differentiate between full- and part-time students.

[4] Data not available.

[5] NJIT's remedial math program begins at the level of trigonometry.

[6] Gloucester County College did not test any part-time students in Fall, 1981.

TABLE 27

Comparison of the Number of Colleges that Grant Graduation Credits For Remedial/Developmental Work by Sector

Fall, 1980 - Fall, 1981

COMMUNITY COLLEGES		STATE COLLEGES		RUTGERS/ NJIT		STATE TOTAL	
1980	1981	1980	1981	1980	1981	1980	1981
8	7[1]	5	4[2]	1	1[3]	14	12

[1] Four of the seven colleges limit the number of credits applicable towards a degree (ranges from 6 to 8 credits); one college has changed this policy effective 7/82; one college has changed this policy effective 7/83.

[2] Three of the four colleges limit the number of credits applicable towards a degree.

[3] Institution limit the number of graduation credits to six.

TABLE 28.

Data Presented by the Colleges on the Effectiveness of their Remedial Programs for Fall, 1981 Entering Students

	Passing Rates	Attrition	Mean GPA	% of GPA <2.00	Credit Ratio	Pre- & Post-Testing	Performance in Subsequent Courses
COMMUNITY COLLEGES							
Atlantic	A	A	A	A	A	ND	A
Bergen	A	A	A	A	A	ND	A
Brookdale	A	NU	ND	NU	NU	ND	A
Burlington	A	A	A	A	A	MA	NU
Camden	A	A	A	A	A	ND	A
Cumberland	A	A	A	ND	A	A	NU
Essex	A	A	ND	ND	ND	A	NU
Gloucester	MA	A	A	A	A	A	NU
Hudson	A	MA	MA	MA	MA	A	A
Mercer	A	A	A	A	NU	A	A
Middlesex	A	A	A	A	A	A	A
Morris	MA	ND	ND	ND	ND	NU	MA
Ocean	NU	NU	NU	NU	NU	ND	NU
Passaic	NU	NU	NU	NU	NU	ND	ND
Salem	A	A	MA	ND	MA	ND	MA
Somerset	NU	MA	MA	ND	MA	MA	A
Union	A	A	A	A	A	NU	A
STATE COLLEGES							
Glassboro	A	A	ND	A	A	A	A
Jersey City	MA	NU	MA	MA	ND	A	ND
Kean	A	A	A	A	MA	A	A
Montclair	A	A	A	A	MA	A	A
Ramapo	A	MA	MA	MA	A	MA	NU
Stockton	A	NU	MA	ND	ND	A	ND
Trenton	MA	ND	MA	MA	ND	ND	A
Wm. Paterson	MA	MA	MA	ND	ND	NU	MA
NJIT	A	A	A	ND	A	MA	MA
Rutgers	A	A	A	A	A	ND	ND

Code:		
	A -	Acceptable
	MA -	Minimally Acceptable
	NU -	Not Useable Data
	ND -	No Data

TABLE 29

Passing Rates of Fall, 1981 Entering Full-Time Students Enrolled in Remedial Courses In READING, WRITING, COMPUTATION and ELEMENTARY ALGEBRA By Sector Academic Year 1981-82

SECTOR	READING				WRITING				COMPUTATION				ELEMENTARY ALGEBRA			
	No. of Colleges	No. of Students	Percent Passing	Range[1]	No. of Colleges	No. of Students	Percent Passing	Range[1]	No. of Colleges	No. of Students	Percent Passing	Range[1]	No. of Colleges	No. of Students	Percent Passing	Range[1]
Community Colleges	14	4,001	62%	46%-92%	15	5,483	64%	52%-83%	14	5,354	50%	35%-80%	8	2,697	44%	14%-68%
State Colleges	8	2,340	81%	71%-95%	8	2,866	73%	63%-90%	7	2,519	78%	64%-89%	4	1,277	69%	52%-79%
NJIT	1	125	90%	-	1	93	97%	-	-	-	-	-	1	230	81%[2]	-
Rutgers	1	439	88%	-	1	1,433	81%	-	1	778	73%	-	1	292	66%	-

[1] Range of individual college passing rates for full-time students passing remedial programs.

[2] NJIT's remedial math program begins at the level of trigonometry.

TABLE 30

Percentage of Full-Time and Part-Time Students Passing Remedial Courses by College

Fall, 1981

COMMUNITY COLLEGES	Reading		Writing		Computation		Algebra	
	N	%	N	%	N	%	N	%
	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT
Atlantic	184/31	69/58	158/30	57/53	181/42	54/69	NA/NA	NA/NA[2]
Bergen	*161/26	70/92	**602/127	79/89	992/271	53/69	611/207	52/66
Brookdale	202/NA	54/NA	264/NA	63/NA	108/NA	38/NA	131/NA	48/NA
Burlington	238/83	80/87	423/92	83/90	349/77	55/79	NA/NA	NA/NA
Camden	312/64	64/39	540/97	61/53	252/62	44/53	388/76	60/50
Cumberland	143/25	76/44	182/47	75/60	97/15	57/87	95/11	68/64
Essex[1]	443	57	731	52	1164	42	541	33
Gloucester	37/NA	92/NA	54/NA	74/NA	45/NA	80/NA	NA/NA	NA/NA
Hudson	482/243	57/52	411/276	59/55	414/355	50/52	NA/NA	NA/NA
Mercer	486/91	57/66	464/91	66/65	371/93	67/65	NA/NA	NA/NA
Middlesex	372/23	69/61	578/38	52/58	611/62	58/57	165/3	61/--
Morris	596/NA	64/NA	446/NA	74/NA	513/NA	35/NA	624/NA	22/NA
Ocean	NA/NA	76/NA	NA/NA	75/NA	NA/NA	72/NA	NA/NA	NA/NA[2]
Passaic	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
Salem	99/5	47/40	175/15	61/73	187/42	58/64	NA/NA	NA/NA
Somerset	NA/NA	NA/NA	190/NA	63/NA	NA/NA	NA/NA	NA/NA	14/NA
Union	248/20	46/55	265/31	52/36	70/16	57/38	142/18	58/67
STATE COLLEGES								
Glassboro	414/17	79/35	229/8	74/37	405/23	87/70	NA/NA	NA/NA[2]
Jersey City[1]	396	71	563	43	467	70	232	73
Kean	363/561	77/61	552/94	82/76	N/A[3]	N/A[3]	447/102	61/58
Montclair	350/33	95/94	222/37	76/89	314/51	86/82	477/80	79/85
Ramapo	248/50	77/76	371/74	69/76	526/99	80/93	NA/NA	NA/NA
Stockton[1]	259	86	261	88	259	89	NA/NA	NA/NA
Trenton[1]	278	89	519	90	433	64	NA/NA	NA/NA
Wm. Paterson	32/NA	72/NA	149/NA	72/NA	115/NA	67/NA	121/NA	52/NA
NJIT[4]	125	90	93	97	NA	NA	230[4]	81[4]
Rutgers	439	88	1,433	81	778	73	292	66

[1] Did not differentiate between full and part-time students.

[2] Does not offer a course in remedial elementary algebra.

[3] Does not offer a course in computation; remediation begins with elementary algebra.

[4] Remediation begins with trigonometry.

*Reading and Writing Level I

**Reading and Writing Level II

TABLE 31

Attrition Rates for Fall, 1981 Full-Time Entering Students According to Need for Remediation in READING by Sector Fall, 1981 to Spring, 1982

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]
Community Colleges	9	4,895	23%	9-30	9	964	9%	0-30	10	561	48%	24-71	9	657	40%	0-97
State Colleges	3	2,673	9%	5-22	3	859	4%	3-5	2	113	32%	29-36	3	116	45%	20-83
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	4,832	5%	-	1	172	11%	-	1	8	59%	-	1	87	9%	-

[1] Range of individual college attrition rates for full-time students within the sector.

[2] Includes failures and withdrawals.

TABLE 32

Attrition Rates and Ratio of Credits Earned to Credits Attempted* for Fall, 1981 Full-Time Entering Students According to Need for Remediation in READING by College

Academic Year 1981-82

(Note: See p.11 for definition of categories)	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio
Community Colleges												
Atlantic	(293)	22%	.75	(125)	10%	.67	(55)	71%	.35	(66)	28%	.52
Bergen[1]	(367)	30%	.76	(113)	6%	.81	(46)	59%	.61	(20)	35%	.46
Brookdale	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington[2]	(253)	9%	.72	(42)	0%	.83	(17)	24%	.47	(11)	0%	.54
Camden	(149)	18%	.79	(111)	7%	.59	(49)	45%	.36	(17)	24%	.53
Cumberland	(178)	30%	.98	(85)	14%	.90	(56)	52%	.82	(22)	18%	.87
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	(226)	20%	.86	(33)	0%	.79	(3)	33%	.33	(66)	35%	.71
Hudson	(123)	24%	.74	(29)	14%	.56	(263)	40%	.58	(0)	NA	NA
Mercer	(894)	19%	NA	(184)	12%	NA	(132)	45%	NA	(121)	39%	NA
Middlesex	(1957)	27%	.70	(224)	9%	.48	(104)	66%	.16	(213)	34%	.49
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem	(134)	28%	.81[3]	(44)	11%	.85[3]	(38)	39%	.38[3]	(25)	32%	.83[3]
Somerset	NA	14%	.92	NA	30%	NA	NA	NA	NA	(78)	97%	NA
Union	(593)	16%	.89	(114)	5%	.79	(110)	24%	.65	(35)	29%	.82
State Colleges												
Glassboro	(729)	11%	.81	(300)	5%	.81	(89)	36%	.53	(18)	83%	.71
Jersey City	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kean	(787)	13%	.97[4]	(279)	3%	.93[4]	(84)	NA	NA[4]	(45)	20%	.83[4]
Montclair	(1157)	5%	1.00[4]	(280)	5%	1.00[4]	(14)	29%	.74[4]	(53)	47%	.83[4]
Ramapo[3]	(195)	22%	.97	(496)	13%	.95	(98)	13%	.84	(19)	26%	.52
Stockton	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Trenton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wm. Paterson[3]	(414)	9%	NA	(930)	6%	NA	(172)	20%	NA	(39)	54%	NA
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	(4832)	5%	.87	(172)	11%	.76	(8)	50%	.40	(87)	9%	.30

*College level courses only.

[1] Reading and Writing Level I

[2] Reading and Writing

[3] Includes all basic skills areas: reading, writing, computation and elementary algebra.

[4] Ratio may be artificially inflated since credits earned include credits received through CLEP testing and transfer credits. These credits are not included in credits attempted.

TABLE 33

Attrition Rates for Fall, 1981 Full-Time Entering Students According to Need for Remediation in WRITING by Sector Fall, 1981 to Spring, 1982

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]
Community Colleges	9	4,270	22%	9-30	9	1,441	10%	0-28	9	787	50%	10-82	9	580	33%	15-93
State Colleges	3	2,806	8%	6-12	3	761	8%	5-17	2	122	30%	6-55	3	68	54%	47-69
NJIT	1	469	10%	–	1	96	9%	–	1	1	100%	–	1	0	–	–
Rutgers	1	5,016	5%	–	1	428	10%	–	1	22	18%	–	1	434	12%	–

1 Range of individual college attrition rates for full-time students within the sector.

2 Includes failures and withdrawals.

TABLE 34

Attrition Rates and Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in WRITING by College

Academic Year 1981-82

(Note: See p. 11 for definition of categories)	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio
Community Colleges												
Atlantic	(344)	23%	.74	(88)	10%	.65	(38)	54%	.39	(60)	30%	.53
Bergen[1]	(367)	30%	.76	(405)	7%	.82	(99)	56%	.55	(72)	40%	.57
Brookdale	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington	(253)	9%	.72	(42)	0%	.82	(17)	24%	.47	(11)	0%	.54
Camden	(149)	18%	.79	(218)	5%	.57	(104)	44%	.45	(22)	36%	.77
Cumberland	(161)	28%	.95	(132)	19%	.91	(45)	82%	.40	(10)	20%	.78
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	(184)	20%	.85	(39)	0%	.80	(10)	10%	.59	(108)	27%	.78
Hudson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercer	(1021)	19%	NA	(274)	15%	NA	(107)	57%	NA	(149)	39%	NA
Middlesex	(1773)	24%	.72	(280)	6%	.50	(283)	53%	.26	(100)	31%	.57
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem	(110)	27%	NA	(44)	9%	NA	(35)	43%	NA	(29)	62%	NA
Somerset	NA	14%	.92	NA	28%	.87	NA	NA	NA	NA	93%	NA
Union	(570)	16%	.85	(137)	11%	.81	(103)	24%	.66	(41)	15%	.83
State Colleges												
Glassboro	(916)	7%	.81	(164)	17%	.79	(60)	55%	.38	(16)	69%	.63
Jersey City	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kean	(584)	12%	.99[2]	(450)	5%	.93[2]	(97)	NA	NA	(32)	47%	.77[2]
Montclair	(1306)	6%	1.00[2]	(147)	5%	1.00[2]	(62)	6%	.79[2]	(20)	55%	.76[2]
Ramapo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stockton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trenton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wm. Paterson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NJIT	(469)	10%	.84	(96)	9%	.77	(1)	--	--	(1)	--	--
Rutgers	(5016)	5%	.87	(428)	10%	.73	(22)	18%	.57	(434)	12%	.77

[1] Reading and Writing Level II

[2] Ratio may be artificially inflated since credits earned include credits received through CLEP testing and transfer credits. These credits are not included in credits attempted.

TABLE 35

Attrition Rates for Fall, 1981 Full-Time Entering Students According to Need for Remediation in COMPUTATION by Sector Fall, 1981 to Spring, 1982

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]	No. of Colleges	No. of Students	Attrition Rate	Range[1]
Community Colleges	9	4,650	20%	15-30	9	1,437	8%	0-19	9	1,062	42%	13-73	9	1,100	27%	5-42
State Colleges	2	1,926	7%	5-10	2	624	8%	5-10	2	98	32%	9-51	2	57	47%	40-50
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	5,151	5%	-	1	282	10%	-	1	18	6%	-	1	442	16%	-

[1] Range of individual college attrition rates for full-time students within the sector.

[2] Includes failures and withdrawals.

TABLE 36

Attrition Rates and Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in COMPUTATION by College

Academic Year 1981-82

(Note: See p. 11 for definition of categories)	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio
Community Colleges												
Atlantic	(67)	21%	.75	(88)	7%	.73	(30)	63%	.39	(61)	23%	.49
Bergen	(367)	30%	.76	(523)	7%	.86	(464)	29%	.66	(213)	41%	.57
Brookdale	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington	(308)	15%	NA	(124)	0%	NA	(43)	52%	NA	(212)	5%	NA
Camden	(149)	18%	.79	(233)	7%	.65	(155)	44%	.48	(118)	19%	.71
Cumberland	(89)	27%	.94	(54)	19%	.89	(42)	57%	.80	(12)	42%	.61
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	(182)	20%	.87	(35)	0%	.76	(8)	13%	.49	(110)	29%	.74
Hudson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercer	(1084)	20%	NA	(251)	12%	NA	(108)	56%	NA	(122)	36%	NA
Middlesex	(1682)	22%	.71	(279)	7%	.56	(293)	58%	.31	(239)	32%	.54
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem	(135)	18%	NA	(57)	14%	NA	(59)	32%	NA	(82)	28%	NA
Somerset	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Union	(731)	15%	.83	(28)	14%	.73	(15)	73%	.75	(49)	14%	.77
State Colleges												
Glassboro	(741)	10%	.81	(347)	10%	.77	(53)	51%	.48	(15)	40%	.59
Jersey City	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Montclair	(1185)	5%	1.00[1]	(270)	5%	.96[1]	(45)	9%	.74[1]	(42)	50%	1.00[1]
Ramapo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stockton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trenton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wm. Paterson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	(5151)	5%	.86	(282)	10%	.73	(18)	6%	.73	(442)	16%	.77

---

[1] Ratio may be artificially inflated since credits earned include credits received through CLEP testing and transfer credits. These credits are not included in credits attempted.

TABLE 37

Attrition Rates and Ratio of Credits Earned to Credits Attempted for Fall, 1981 Full-Time Entering Students According to Need for Remediation in ELEMENTARY ALGEBRA by College

Academic Year 1981-82

(Note: See p. 11 for definition of categories)	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio	(N)	Attrition	Credit Ratio
Community Colleges												
Atlantic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bergen	(367)	30%	.76	(229)	7%	.88	(179)	26%	.66	(470)	33%	.64
Brookdale	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Camden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cumberland	NA	NA	NA	(54)	11%	.97	(39)	41%	.79	(3)	100%	NA
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hudson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercer	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Middlesex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Somerset	NA	14%	.92	NA	32%	.87	NA	NA	NA	NA	73%	NA
Union	(664)	15%	.84	(65)	9%	.84	(28)	43%	.55	(13)	10%	.82
State Colleges												
Glassboro	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jersey City	NA	NA	NA[1]	NA	NA	NA[1]	NA	NA	NA[1]	NA	NA	NA[1]
Kean	(686)	12%	.96	(273)	3%	.99	(174)	48%	.99	(46)	24%	.82
Montclair	(332)	3%	1.00[1]	(273)	4%	1.00[1]	(56)	11%	.85[1]	(159)	16%	.91[1]
Ramapo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stockton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trenton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wm. Paterson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	(5109)	4%	.87	(317)	13%	.72	(19)	16%	.62	(398)	13%	.80

---

[1] Ratio may be artificially inflated since credits earned include credits received through CLEP testing and transfer credits. These credits are not included in credits attempted.

TABLE 38

Ratio of Credits Earned to Credits Attempted* For Fall, 1981 Full-Time Entering Students According to Need for Remediation in READING by Sector
Fall, 1981 to Spring, 1982

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Courses				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Ratio	Range[1]	No. of Colleges	No. of Students	Ratio	Range[1]	No. of Colleges	No. of Students	Ratio	Range[1]	No. of Colleges	No. of Students	Ratio	Range[1]
Community Colleges	8	4,001	.76	.72-.98	8	780	.70	.56-.90	8	429	.48	.33-.82	8	458	.59	.46-.87
State Colleges	1	729	.81	-	1	300	.81	-	1	89	.53	-	1	18	.71	-
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	4,832	.87	-	1	172	.76	-	1	8	.20	-	1	87	.80	-

* College level courses only.

1 Range of individual college ratio of credits earned to credits attempted within the sector.

2 Includes failures and withdrawals.

TABLE 39

Ratio of Credits Earned to Credits Attempted* For Fall, 1981 Full-Time Entering Students According to Need for Remediation in WRITING by Sector Fall, 1981 to Spring, 1982

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation²				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Ratio	Range¹	No. of Colleges	No. of Students	Ratio	Range¹	No. of Colleges	No. of Students	Ratio	Range¹	No. of Colleges	No. of Students	Ratio	Range¹
Community Colleges	7	3,139	.75	.74-.95	7	1,123	.74	.65-.91	7	595	.65	.26-.66	7	413	.64	.53-.84
State Colleges	1	916	.81	-	1	164	.79	-	1	60	.38	-	1	16	.63	-
NJIT	1	469	.84	-	1	96	.77	-	1	1	-	-	1	1	-	-
Rutgers	1	5,016	.87	-	1	428	.73	-	1	22	.57	-	1	434	.77	-

* College level courses only

1 Range of individual college ratio of credits earned to credits attempted within the sector.

2 Includes failures and withdrawals.

TABLE 40

Ratio of Credits Earned to Credits Attempted* For Fall, 1981 Full-Time Entering Students According to Need for Remediation in COMPUTATION by Sector
Fall, 1981 to Spring, 1982

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Ratio	Range[1]	No. of Colleges	No. of Students	Ratio	Range[1]	No. of Colleges	No. of Students	Ratio	Range[1]	No. of Colleges	No. of Students	Ratio	Range[1]
Community Colleges	6	3,123	.76	.75-.94	6	1,005	.76	.73-.89	6	859	.53	.31-.80	6	684	.59	.49-.77
State Colleges	1	741	.81	-	1	347	.77	-	1	53	.48	-	1	15	.59	-
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	5,151	.86	-	1	282	.73	-	1	18	.73	-	1	442	.77	-

* College level courses only.

1 Range of individual college ratio of credits earned to credits attempted within the sector.

2 Includes failures and withdrawals.

TABLE 41

Grade Point Average (GPA)* for Fall, 1981 Full-Time Entering Students According to Need for Remediation in READING By Sector

Academic Year 1981-82

MEAN GPA

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]
Community Colleges	9	4,303	2.07	1.51 - 2.55	9	989	1.92	1.54 - 2.75	9	446	0.95	0.43 - 1.49	9	482	1.56	0.96 - 2.35
State Colleges	2	1,842	2.59	2.33 - 2.99	2	550	2.09	2.08 - 2.58	1	14	1.42	---	2	89	1.70	1.41 - 1.83
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	4,487	2.51	-	1	148	1.85	-	1	4	0.50	---	1	766	2.07	-

GPA Below 2.00

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]
Community Colleges	8	4,125	36%	26%-56%	8	904	53%	31%-76%	8	390	78%	56%-93%	8	418	61%	31%-75%
State Colleges	2	2,493	19%	4%-23%	3	835	35%	3%-42%	3	71	56%	38%-90%	2	71	60%	26%-69%
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	4,487	25%	-	1	148	51%	-	1	4	75%	-	1	766	43%	-

*For regular college courses.

1. Range of individual college mean GPA's within the sector.
2. Includes failures and withdrawals.
3. Range of individual college percent below 2.00 GPA within the sector.

TABLE 42

Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in READING by College

Academic Year 1981-82

(Note: See p. 11 for definition of categories)	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
COMMUNITY COLLEGES	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00
Atlantic	2.18	(293)	35	1.63	(125)	58	0.72	(55)	93	1.33	(66)	72
Bergen[1]	1.51	(367)	56	1.45	(113)	69	0.43	(46)	93	0.96	(20)	75
Brookdale	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington[1]	2.10	(253)	37	2.34	(42)	31	1.24	(17)	77	1.54	(11)	63
Camden	2.27	(120)	26	1.54	(97)	65	1.01	(25)	72	1.63	(12)	41
Cumberland	2.55	(178)	NA	2.10	(85)	NA	1.49	(56)	NA	2.19	(22)	NA
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	2.20	(226)	32	1.67	(33)	76	0.67	(3)	67	1.35	(66)	57
Hudson[2]	NA	(123)	49	NA	(29)	76	NA	(263)	90	NA	(0)	NA
Mercer	2.07	(894)	42	1.56	(184)	59	0.80	(132)	81	1.59	(121)	58
Middlesex	2.20	(1482)	31	1.90	(205)	39	0.80	(35)	77	1.70	(140)	43
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem[2]	2.28	(11)	27	2.04	(69)	42	0.77	(38)	79	2.35	(42)	31
Somerset	2.45	NA	NA	2.75	NA	NA	NA	NA	NA	NA	NA	NA
Union	2.20	(490)	32	1.96	(105)	36	1.31	(77)	56	1.78	(24)	50
STATE COLLEGES												
Glassboro	NA	(651)	22	NA	(285)	26	NA	(57)	48	NA	(3)	33
Jersey City	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kean	2.50	(685)	23	2.10	(270)	42	NA	NA	NA	1.80	(36)	69
Montclair	2.65	(1157)	14	2.08	(280)	39	1.42	(14)	90	1.63	(53)	54
Ramapo[2]	2.99	(195)	10	2.58	(496)	19	1.70	(98)	45	1.41	(19)	26
Stockton[2]	2.50	NA	NA	2.30	NA	NA	NA	NA	NA	NA	NA	NA
Trenton[2]	2.78	(134)	4	2.58	(525)	3	2.10	(16)	38			
Wm. Paterson[2]	2.33	(414)	NA	2.17	(930)	NA	1.76	(172)	NA	1.83	(39)	NA
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	2.51	(4487)	25	1.85	(148)	51	0.50	(4)	51	2.07	(766)	43

---

[1] Reading and Writing

[2] Includes all basic skills areas: reading, writing, computation and elementary algebra.

TABLE 43

Grade Point Average (GPA)* for Fall, 1981 Full-Time Entering Students According to Need for Remediation in WRITING By Sector

Academic Year 1981-82

MEAN GPA

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]
Community Colleges	8	3,762	·2.15	1.51 - 2.45	8	1,434	1.76	1.51 - 2.33	8	562	0.96	0.35 - 1.48	8	564	1.57	1.38 - 2.37
State Colleges	2	678	2.61	2.60 - 2.64	2	575	2.18	2.11 - 2.20	1	62	1.30	---	2	37	1.60	1.55 - 1.66
NJIT	1	469	2.25	---	1	96	1.96	---	1	1	---	---	1	1	---	---
Rutgers	1	4,674	2.50	---	1	364	1.83	---	1	17	1.33	---	1	363	2.07	---

GPA Below 2.00

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]
Community Colleges	7	3,601	35%	26%-56%	7	1,302	54%	41%-67%	7	517	74%	54%-93%	7	554	55%	19%-69%
State Colleges	3	1,526	21%	15%-23%	3	711	37%	32%-39%	2	89	74%	63%-79%	3	53	66%	57%-78%
NJIT	1	NA	NA	---	1	NA	NA	---	1	NA	NA	---	1	NA	NA	---
Rutgers	1	4,674	26%	---	1	364	52%	---	1	17	65%	---	1	363	39%	---

---

*For regular college courses.

1. Range of individual college mean GPA's within the sector.
2. Includes failures and withdrawals.
3. Range of individual college percent below 2.00 GPA within the sector.

TABLE 44

Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in WRITING by College

Academic Year 1981-82

(Note: See p. II for definition of categories)	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
COMMUNITY COLLEGES	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00
Atlantic	2.14	(88)	37	1.51	(88)	64	0.92	(38)	86	1.36	(60)	66
Bergen	1.51	(367)	56	1.75	(405)	56	0.35	(99)	93	1.23	(72)	69
Brookdale	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Camden	2.27	(120)	26	1.64	(116)	52	1.48	(54)	60	2.37	(21)	19
Cumberland	2.58	(161)	NA	2.03	(132)	NA	0.81	(45)	NA	1.94	(10)	NA
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	2.20	(184)	32	1.80	(39)	67	1.40	(10)	70	1.64	(108)	57
Hudson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercer	2.06	(1021)	41	1.57	(274)	62	0.70	(107)	85	1.38	(149)	64
Middlesex	2.30	(1353)	28	1.90	(264)	41	1.20	(133)	67	1.80	(112)	41
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Somerset	2.45	NA	NA	2.33	NA	NA	NA	NA	NA	NA	NA	NA
Union	2.21	(468)	30	1.87	(116)	46	1.41	(76)	54	1.92	(32)	41
STATE COLLEGES												
Glassboro	NA	(848)	23	NA	(136)	32	NA	(27)	63	NA	(16)	57
Jersey City	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kean	2.60	(542)	20	2.20	(428)	39	NA	NA	NA	1.66	(17)	59
Montclair	2.64	(136)	15	2.11	(147)	36	1.30	(62)	79	1.55	(20)	78
Ramapo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stockton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trenton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wm. Paterson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NJIT	2.25	(462)	NA	1.96	(96)	NA	0	--	--	1	--	--
Rutgers	2.50	(4674)	26	1.83	(364)	52	1.33	(17)	65	2.07	(363)	39

---

[1] Reading and Writing Level II

TABLE 45

Grade Point Average (GPA)* For Fall, 1981 Full-Time Entering Students According to Need for Remediation in COMPUTATION By Sector

Academic Year 1981-82

MEAN GPA

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]	No. of Colleges	No. of Students	Mean GPA	Range[1]
Community Colleges	9	4,279	2.10	1.51 - 2.66	9	1,402	1.92	1.59 - 2.12	9	831	1.10	0.50 - 1.78	9	1,024	1.63	1.22 - 2.15
State Colleges	1	1,185	2.66	---	1	270	2.65	---	1	45	0.96	---	1	42	2.13	---
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	4,809	2.48	---	1	236	1.87	---	1	17	1.58	---	1	353	2.10	---

GPA Below 2.00

SECTOR	NO NEED FOR REMEDIATION				NEED REMEDIATION											
					Passed Remedial Course				Did Not Complete Remediation[2]				Not Enrolled in Remediation			
	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]	No. of Colleges	No. of Students	% < 2.00	Range[3]
Community Colleges	8	4,190	37%	26%-56%	8	1,348	45%	39%-69%	8	1 789	76%	38%-89%	8	1,012	54%	33%-68%
State Colleges	2	1,855	17%	14%-23%	2	101	30%	29%-41%	2	71	66%	54%-73%	2	51	43%	43%-44%
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	1	4,809	27%	---	1	236	50%	---	1	17	59%	---	1	353	39%	---

---

*For regular college courses.

1. Range of individual college mean GPA's within the sector
2. Includes failures and withdrawals.
3. Range of individual college percent below 2.00 GPA within the sector.

TABLE 46

Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in COMPUTATION by College

Academic Year 1981-82

(Note: See p. 11 def.)	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
COMMUNITY COLLEGES	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00
Atlantic	2.14	(67)	37	1.86	(88)	50	0.81	(30)	89	1.28	(61)	64
Bergen	1.51	(367)	56	2.08	(523)	41	1.08	(464)	76	1.22	(213)	68
Brookdlae	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington	2.22	(308)	34	2.12	(124)	41	0.50	(43)	86	1.88	(212)	45
Camden	2.27	(120)	26	1.76	(98)	42	1.18	(85)	66	2.15	(116)	33
Cumberland	2.66	(89)	NA	1.79	(54)	NA	1.03	(42)	NA	1.79	(12)	NA
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	2.31	(182)	29	1.75	(35)	69	1.08	(8)	62	1.49	(110)	62
Hudson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercer	2.01	(1084)	44	1.59	(251)	57	0.63	(108)	88	1.64	(122)	58
Middlesex	2.20	(1482)	31	2.00	(205)	39	1.20	(35)	61	1.70	(140)	46
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Somerset	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Union	2.13	(580)	34	1.63	(24)	42	1.78	(16)	38	1.53	(38)	50
STATE COLLEGES												
Glassboro	NA	(670)	23	NA	(311)	29	NA	(26)	54	NA	(9)	44
Jersey City	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kean[1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Montclair	2.66	(1185)	14	2.65	(270)	41	0.96	(45)	73	2.13	(42)	43
Ramapo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stockton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trenton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wm. Paterson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	2.48	(4809)	27	1.87	(236)	50	1.58	(17)	59	2.10	(353)	39

TABLE 47

Grade Point Average (GPA) for Fall, 1981 Full-Time Entering Students According to Need for Remediation in ELEMENTARY ALGEBRA by College

Academic Year 1981-82

	No Remediation			Passed Remedial Course			Did Not Complete Remediation			Not Enrolled in Remediation		
COMMUNITY COLLEGES	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00	$\bar{X}$	(N)	% 2.00
Atlantic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bergen	1.51	(367)	56	2.41	(229)	30	1.39	(179)	63	1.27	(470)	67
Brookdale	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Burlington	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Camden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cumberland	2.66	(89)	NA	2.40	(54)	NA	2.04	(39)	NA	—	(3)	NA
Essex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gloucester	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hudson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercer	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Middlesex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Morris	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ocean	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Passaic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salem	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Somerset	2.45	(NA)	NA	2.75	(NA)	NA	NA	NA	NA	NA	NA	NA
Union	2.15	(522)	34	1.92	(59)	42	1.71	(16)	38	1.78	(10)	30
STATE COLLEGES												
Glassboro	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jersey City	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kean	2.50	(606)	25	2.40	(265)	27	1.60	(9)	67	1.90	(35)	66
Montclair	2.70	(332)	12	2.58	(273)	17	1.60	(56)	52	2.16	(159)	41
Ramapo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stockton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trenton	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wm. Paterson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NJIT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rutgers	2.47	(4810)	27	1.90	(255)	47	1.35	(16)	69	2.27	(309)	33

TABLE 48

PRE-POST TESTING

Reading

COMMUNITY COLLEGES	TEST USED	PRE - TEST N	PRE - TEST Mean	PRE - TEST Standard Deviation	POST - TEST N	POST - TEST Mean	POST - TEST Standard Deviation	RESULTS Mean Difference	RESULTS t-value	RESULTS Level of Significance
Atlantic	NA									
Bergen	NA									
Brookdale	NA									
Burlington	Stanford Diagnostic	62			62			+ 1.6 grade levels		.05
	Stanford Diagnostic	62			62			+17.7 percentile		.05
	Nelson Denny	81			81					
Camden	NA									
Cumberland	RC	36	15.69	4.12	36	16.44	5.66	+ .75		.05
	RC	59	22.54	7.13	59	25.30	6.24	+ 2.76		.05
Essex	TABE: Vocabulary	90	464.77	69.9	90	477.12	57.3	+12.34	2.23	0.028
	Comprehension	96	486.50	58.3	96	522.82	58.1	+36.33	6.89	0.000
	Total Reading	90	463.16	61.4	90	491.01	59.1	+27.84	5.20	0.000
	TABE: Vocabulary	104	542.57	8.5	104	570.81	74.1	+28.24	3.61	0.000
	Comprehension	102	525.98	57.0	102	550.47	54.3	+24.49	3.85	0.000
	Total Reading	103	527.84	64.8	103	552.79	78.0	+24.95	2.84	0.005

TABLE 48

PRE-POST TESTING

Reading

COMMUNITY COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Gloucester	Stanford Reading Test	68	9.30	9.97	68	9.18	2.71	- .12	.068	None
Hudson	RC	419	14.49	6.26	269	18.07	6.87	+24.9		
	RC	319	16.20	7.20	236	18.54	6.70	+14.6		
Mercer	McGraw Hill	300	572.26	62.01	300	590.75	69.05	+18.37	6.45	.001
	McGraw Hill	96	649.00	48.02	96	660.32	55.15	+11.32	1.95	.03
Middlesex	RC	199	144.1	6.3	199	154.6	10.2	+10.5	19.99	.001
Morris	NA									
Ocean	NA									
Passaic	NA									
Salem	NA									
Somerset	NA									
Union	NA									

TABLE 48

PRE-POST TESTING

Reading

STATE COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Glassboro	RC	269	62.16			68.83		+ 6.67	17.42	.01
	RC	112	47.62			59.75		+12.13	14.32	.01
Jersey City (Reading for College)	RC	62	13.73	4.50	62	16.66	6.55	+ 2.93	3.76	.001
	LR	62	19.10	5.25	62	22.92	6.77	+ 3.82	5.30	.001
	Total Reading	62	32.82	7.54	62	39.58	12.03	+ 6.76	5.97	.001
(Reading &SSI)	RC	51	19.49	5.26	51	21.76	6.36	+ 2.27	2.71	.01
	LR	51	24.90	4.95	51	27.18	6.03	+ 2.28	2.63	.05
	Total Reading	51	44.39	9.07	51	48.94	10.43	+ 4.55	3.12	.01
(Crit. & Eff. Reading)	RC	23	25.78	6.01	23	28.35	5.46	+ 2.57	2.29	.05
	LR	23	32.83	4.99	23	35.61	5.33	+ 2.78	3.30	.01
	Total Reading	23	58.61	9.26	23	63.96	9.33	+ 5.35	3.71	.01
(Learning Strat.)	RC	36	27.36	3.73	36	28.44	3.46	+ 1.08	1.82	--
	LR	36	32.31	5.90	36	35.92	5.60	+ 3.61	5.21	.001
	Total Reading	36	59.67	7.69	36	64.36	7.64	+ 4.69	5.55	.001
(PASS)	RC	36	13.64	4.77	36	15.53	7.20	+ 1.89	1.63	--
	LR	36	19.08	5.34	36	22.22	6.72	+ 3.14	2.65	.05
	Total Reading	36	32.72	8.43	36	37.75	12.48	+ 5.03	2.55	.05

TABLE 48

PRE-POST TESTING

Reading

STATE COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Kean	Nelson Denny	26	7.24		26	9.02		+ 1.78		
	Nelson Denny	274	9.04		274	12.02		+ 2.96		
Montclair	Diagnostic Reading Test	258	9.469	1.752	258	10.457	5.337	+ 0.988	3.079	.005
Ramapo	NA									
Stockton	McGraw Hill - Raw Score	225	39.94		225	44.71		+ 4.77	10.37	.0001
	Percentile	225	23.96		225	32.65		+ 8.69	7.38	.0001
	LR	228	35.90		228	37.86		+ 1.96	7.08	.0001
	RC	228	27.70		228	29.20		+ 1.50	4.81	.0001
Trenton	NA									
Wm. Patterson	RC	154	152		154	163		+11		

105

106

TABLE 49

PRE-POST TESTING

Writing

COMMUNITY COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Atlantic	NA									
Bergen	NA									
Brookdale	NA									
Burlington	NA									
Camden	NA									
Cumberland	SS	66	12.56	3.94	66	15.197	5.33	+ 2.64		.05
	SS	65	19.08	6.14	65	21.62	5.95	+ 2.54		.05
Essex	SS	306	17.07	5.5	306	20.98	6.5	+ 3.90	12.82	.000
	Local Essay	544	1.77	3.80	544	2.41	4.25	+ .63	2.92	.000
Gloucester	Multiple Choice -150 Items	72	40.87	20.50	72	64.29	12.44	+23.42	8.51	
Hudson	SS	419	13.13	5.31	261	16.75	5.78	+ 3.62		
	SS	319	13.83	6.06	239	15.70	5.86	+ 1.87		

TABLE 49

PRE-POST TESTING

Writing

COMMUNITY COLLEGES	TEST USED	PRE - TEST N	PRE - TEST Mean	PRE - TEST Standard Deviation	POST - TEST N	POST - TEST Mean	POST - TEST Standard Deviation	RESULTS Mean Difference	RESULTS t-value	RESULTS Level of Significance
Mercer	Language Test	57	480.12	70.61	57	505.72	78.02	+ 25.60	2.93	.003
	CTBS	209	574.93	52.18	209	588.20	63.37	+ 13.27	3.49	.001
Middlesex	SS		150.2			155.8		+ 5.6	7.82	.001
Morris	Writing Sample	45	12.91		45	20.96		+ 8.05	10.05	.001
Ocean	NA									
Passaic	NA									
Salem	NA									
Somerset	SS	85	54		85	58		+ 4		
Union	NA									

TABLE 49 :

PRE-POST TESTING

Writing

STATE COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Glassboro	Essay	217	6.05	--	217	7.36	—	+ 1.31	11.92	.01
Jersey City	SS	184	18.71	6.28	184	20.81	6.38	+ 2.10	6.52	.001
	SS	36	21.89	4.28	36	24.58	4.24	+ 2.69	4.48	.001
	SS	36	13.06	4.27	36	15.92	5.94	+ 2.86	3.42	.001
Kean	Writing Sample	238	6.49	1.5	238	7.07	1.5	+ .58		
Montclair	NA									
Ramapo	Essay	371	0% passed		371	68% passed				
Stockton	Holistic Writing	212	6.66		212	7.47		+ 0.81	7.10	.0001
Trenton	NA									
Wm. Paterson	Essay	452	5.7		452	7.3		+ 1.6		

TABLE 50

PRE-POST TESTING

Math

STATE COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Glassboro	MC	231	64.19		231	72.75		+ 8.56	27.44	.01
	MC	135	52.19		135	66.65		+14.47	26.44	.01
Jersey City	MC	75	8.85	3.04	75	13.59	4.65	+ 4.74	8.63	.001
	MC	76	14.45	4.19	76	18.14	4.99	+ 3.69	8.77	.001
Kean	NA									
Montclair	MC	239	23.251	4.561	239	30.234	3.188	+ 6.983	26.863	.001
Ramapo	MC	25	11.76		25	26.16		+14.40		.01
Stockton	California Achievement Test	235	55.15		235	68.17		+13.03	33.00	.0001
			9.91			11.61		+ 1.71	17.00	.0001
	MC	245	17.29		245	22.82		+ 5.52	22.15	.0001
Trenton	NA									
William Paterson	MC	236	15.4	3.8	236	25.0	3.0	+ 9.6		

TABLE 50

PRE-POST TESTING

Math

COMMUNITY COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Atlantic	NA									
Bergen	NA									
Brookdale	NA									
Burlington	NA									
Camden	NA									
Cumberland	MC	46	10.19	3.96	46	19.93	3.76	+ 9.8		.05
Essex	30 item in house test	116 237	11.53 9.04	4.6 4.9	116 237	20.68 18.86	6.7 7.3	+ 9.15 + 9.82	16.34 23.35	
Gloucester	50 question in house test	68	22.13%	12.04%	68	71.0%	19.06%	+48.87%	12.86	
Hudson	MC MC	419 388	10.59 12.20	5.28 6.60	252 235	20.29 19.00	6.16 5.50	+ 9.70 + 6.80		
Mercer	MC	196	148.91	5.11	196	163.82	7.52	+14.91	29.68	.001

TABLE 50

PRE-POST TESTING

Math

COMMUNITY COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Middlesex	MC	98	157.2	8.8	98	166.3	8.5	+ 9.0	12.26	.001
Morris	NA									
Ocean	NA									
Passaic	NA									
Salem	NA									
Somerset	NA									
Union	NA									

nr 118

Page 1 of 3

TABLE 51

PRE-POST TESTING

Elementary Algebra

COMMUNITY COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Atlantic	NA									
Bergen	NA									
Brookdale	NA									
Burlington	NA									
Camden	NA									
Cumberland	El. Al.	71	5.18	4.9	71	12.32	4.9	+7.14		.05
Essex	30 item in house test	261	5.20	4.7	261	18.29	6.7	+13.08	32.90	
Gloucester	NA									
Hudson	NA									
Mercer	NA									
Middlesex	NA									
Morris	NA									

TABLE 51

PRE-POST TESTING

Elementary Algebra

		PRE - TEST			POST - TEST			RESULTS		
COMMUNITY COLLEGES	TEST USED	N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Ocean	NA									
Passaic	NA									
Salem	NA									
Somerset	NA									
Union	NA									

TABLE 51

PRE-POST TESTING

Elementary Algegra

STATE COLLEGES	TEST USED	PRE - TEST			POST - TEST			RESULTS		
		N	Mean	Standard Deviation	N	Mean	Standard Deviation	Mean Difference	t-value	Level of Significance
Glassboro	NA									
Jersey City	NA									
Kean	Faculty dev. test	186	6.4	4.8	18.6	40.6	11.7	+34.2		
Montclair	El. Al.	241	22.141	3.710	241	27.667	2.7	+ 5.124	22.629	.001
Ramapo	NA									
Stockton	El. Al.	245	10.95		245	15.00		+ 4.05	15.07	.0001
Trenton	NA									
William Paterson	El. Al.	198	12	5	198	19	4	+ 7		

TABLE 52

Performance in Subsequent Courses

English

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
Community Colleges					
Atlantic	ENG 101	16	38	67	69
Bergen	NA				
Brookdale	ENG 125	199	68	182	73
Burlington	NA				
Camden	Composition I	103	59	208	45
Cumberland	ENG 101	134	97	77	86
Essex	NA				
Gloucester	NA				
Hudson	Communications I	32	78	70	57
Mercer	Composition	733	87	191	78
Middlesex	NA				
Morris	Composition	NA	64	NA	73
Ocean	NA				
Passaic	NA				
Salem	ENG 101	79	70	39	85
Somerset	English Composition I English Composition II	80 80	69 86	76 32	65 90
Union	ENG 101	403	91	100	91

TABLE 52

Performance in Subsequent Courses

English

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
State Colleges					
Glassboro	Communicaitons I	971	85	145	76
Jersey City	NA				
Kean	Writing Writing	459 446	92 92	56 36	89 97
Montclair	Introduction to Literature	756	92	162	86
Ramapo	NA				
Stockton	NA				
Trenton	English I	31	84	27	74
Wm. Paterson	Writing	363	67	402	63

TABLE 53

Performance in Subsequent Courses

Math

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
Community Colleges					
Atlantic	Basic Math	18	83	67	67
Bergen	Accounting I	252	69	52	83
Brookdale	MTH 131	64	60	1	0
Burlington	NA				
Camden	Algebra	23	44	135	40
Cumberland	NA				
Essex	NA				
Gloucester	NA				
Hudson	Business Math	62	71	77	62
	Accounting	65	71	12	75
Mercer	Foundations of Math	57	69	8	38
Middlesex	Math 121	45	62	25	72
Morris	NA				
Ocean	NA				
Passaic	NA				
Salem	MA 103	36	78	9	56
Somerset	College Algebra	100	69	28	90
Union	Math	124	83	29	79

TABLE 53

Performance in Subsequent Courses

Math

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
State Colleges					
Glassboro	Math I	562	78	173	83
Jersey City	NA				
Kean	Math	459	92	39	97
Montclair	Business Math/Linear Alg.	109	93	120	83
	Calculus	69	80	23	78
Ramapo	NA				
Stockton	NA				
Trenton	Math 101	22	77	23	83
Wm. Paterson	NA				

TABLE 54

Performance in Subsequent Courses

Social Science/Humanties

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
Community Colleges					
Atlantic	Sociology	36	81	29	92
Bergen	General Psychology	545	79	66	58
Brookdale	HIS 135	83	81	18	89
Burlington	NA				
Camden	Basic Psychology	431	61	71	41
	History of Western Civ.	22	73	23	74
Cumberland	NA				
Essex	NA				
Gloucester	NA				
Hudson	Intro. to Psychology	83	53	41	68
	Sociology	39	79	30	46
Mercer	Psychology	279	81	49	69
	Sociology	162	80	26	77
	Contemporary Society	65	52	19	53
Middlesex	Psychology	295	78	79	63
Morris	NA				
Ocean	NA				
Passaic	NA				
Salem	NA				
Somerset	NA				
Union	Psychology	361	83	93	67

TABLE 54

Performance in Subsequent Courses

Social Science/Humanities

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
State Colleges					
Glassboro	General Psychology	364	92	66	92
Jersey City	NA				
Kean	Psychology	383	93	32	100
	Psychology	371	93	23	96
	Psychology	439	90	28	96
	Fine Arts	93	96	12	100
	Economics	146	89	11	100
	Economics	198	89	11	91
Montclair	General Psychology	735	92	120	79
	Sociology 100	209	82	26	65
	Sociology 101	109	89	23	87
	Economics 101	362	93	25	80
	Economics 102	229	90	36	83
Ramapo	NA				
Stockton	NA				
Trenton	Psychology	67	87	18	83
Wm. Paterson	NA				

TABLE 55

Performance in Subsequent Courses

Science

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
Community Colleges					
Atlantic	NA				
Bergen	Anatomy & Physiology	100	82	22	86
	Intro to Chemistry	29	90	27	67
	Intro to Chemistry	93	83	36	50
Brookdale	BIO 105	11	73	4	100
Burlington	NA				
Camden	NA				
Cumberland	NA				
Essex	NA				
Gloucester	NA				
Hudson	NA				
Mercer	Prep. Chemistry	54	79	17	71
Middlesex	NA				
Morris	NA				
Ocean	NA				
Passaic	NA				
Salem	NA				
Somerset	NA				
Union	NA				

TABLE 55

Performance in Subsequent Courses

Science

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
State Colleges					
Glassboro	NA				
Jersey City	NA				
Kean	Biology	206	88	15	93
Montclair	NA				
Ramapo	NA				
Stockton	NA				
Trenton	Biology	73	95	7	100
Wm. Paterson	NA				

TABLE 56

Performance in Subsequent Courses

Other

COLLEGE	COURSE	No Need for Remediation		Passed Remedial Course	
		No.	% Pass	No.	% Pass
Bergen (Reading & Writing)	Intro to Data Processing	448	81	55	82
(Math Comp)	Intro to Data Processing	348	82	104	82
(El. Al.)	Intro to Data Processing	255	76	33	82
(Reading & Writ)	Intro to Business Admin.	1319	76	30	53
(Math Comp.)	Intro to Business Admin	688	79	154	58
(El. Al.)	Intro to Business Admin	635	72	58	67
(El. Al.)	Foundations of Phys. Ed.	930	79	30	80
Mercer	Business Org. & Management				
	Computer Science	244	88	41	73
		203	69	20	65

APPENDIX A

INTERPRETING THE RESULTS OF THE TESTING PROGRAM [1]

Proficiency Levels

Based upon its understanding of the content and difficulty level of the test, and upon the recommendations of its advisory committees, the Council offers the following general propositions to assist in understanding the test results presented in this report.

Verbal Skills

For the purpose of this report, students who scored below 161 on Total English* were placed in the "Lack Proficiency" category. Those who fell in the 161-172 range on Total English were considered in the "Lack Proficiency in Some Areas" category while those students above 172 on Total English "Appear to be Proficient". A more precise understanding of an individual student's scores can be achieved by considering the following.

In the Council's judgement, all students with essay scores of 2, 3 or 4, and those students with an essay score of 5 or 6 but less than 80% correct on any of the three relatively easy multiple-choice tests, are seriously deficient in their use of the written language. An essay score of 2, 3, or 4 indicates pronounced weaknesses in writing: in these essays the message is not always clear, the idea is either not developed or not logical, and the conventions of the written language are usually not observed. An essay score of 5 or 6, together with less than 80% correct on one or more of the multiple-choice tests, indicates a need for help in following the conventions of the written language, and in developing and comprehending an idea in a coherent manner.

Many students exhibit a pattern of performance that must be reviewed more carefully, since they probably require some assistance in one or more areas according to the requirements and standards of the individual colleges. Students in this category either did not demonstrate proficiency in one or more areas, or exhibited a marked discrepancy among scores—for example, a high essay score and a low sentence structure score is a pattern that bears examination. Essay scores of 5, 6 or 7 together with multiple-choice scores above 80% are "average" in that the essays tend to lack depth and coherence and, despite the multiple-choice scores, the writing samples may exhibit flaws in structure and/or language conventions. An essay score of 7 combined with scores of less than 80% correct on one or more of the multiple-choice tests indicates at best a marginal performance. Essay scores of 8-12 and less than 80% correct on any one of the relatively easy multiple-choice tests are discrepant patterns, since these essay scores indicate a range from above average to excellent, and the multiple-choice scores appear to contradict the essay scores.

Students with essay scores of 8-12 and 80% correct on all three multiple-choice tests seem to be proficient in the basic skills of reading and writing. The writers of these essays have control of both the language and the structures they are using: generally speaking, they can comprehend a relatively mature idea and develop it in standard English.

---

* Total English is a composite score based on all four reading and writing sections.

[1] Excerpt from the Basic Skills Council report to the Board of Higher Education, November, 1981.

Computation

A scaled score of 165 or below (20 or fewer questions correct out of 30 on the 1981 test) indicates pronounced weaknesses in dealing with certain computational operations and in particular with problems involving percentages and decimals. Declining scores indicate progressively greater difficulty with operations involving fractions. Students scoring below 166 on the Computation test are included in the category: "Lack Proficiency".

The range of scaled scores from 166 to 172 (21 to 25 questions correct) indicates greater familiarity with elementary computation but still shows definite weaknesses. The particular weaknesses of an individual student can be identified only by examining individual item responses. Students falling in the range of 166 to 172 on the Computation test fall in the category: "Lack Proficiency in Some Areas".

Students who achieve a scaled score of at least 173 (26 questions correct) seem to be proficient in the elementary computational skills measured by this test and fall in the "Appear to be Proficient" category.

Elementary Algebra

Students who achieve a scaled score of 166 or below (14 or fewer questions correct out of 30 on the 1981 test) definitely lack an understanding of elementary algebra. Such students may possess a smattering of knowledge but have difficulty with a wide variety of elementary operations, and are not able in general to perform sustained operations involving a succession of simple steps. Students in this category ("Lack Proficiency") probably need to restudy elementary algebra from the beginning.

The particular difficulties of students who score in the scale range from 167 to 182 (15 to 25 questions correct) vary. They have some misconceptions, have some trouble dealing with equations involving letters rather than numbers, and probably cannot handle sustained operations well. The type of assistance or course work such students may require will depend on each student's background and can be determined by careful examination of the particular patterns of item responses. Students scoring in the range of 167 to 182 on the Elementary Algebra are included in the "Lack Proficiency in Some Areas" category.

Students who achieve a scaled score of 183 and above (26 or more questions correct) seem to have no widespread weaknesses in performing elementary algebraic operations and fall in the "Appear to be Proficient" category. They probably can do simple sustained operations. The test does not extend far enough in difficulty level to determine whether students scoring in this highest range are able to complete a complex succession of simple operations.

APPENDIX B

The following is a listing, by sector, of each institution's policy regarding students who fail to remove basic skills deficiencies. All data is based upon self-reported information submitted by the institution.

School	Policy	Is there a credit/time limit within which students must enroll and pass remedial courses?
	Sector: County Colleges	
Atlantic	Regular college policy regarding academic probation, suspension, and dismissal.	yes
Bergen	Students may register for any courses in which the prerequisites have been completed successfully. English skills courses are prerequisites to English courses only. Algebra required in certain curriculums only.	no
Brookdale	Regular college policy regarding academic probation, suspension and dismissal.	yes
Burlington	Regular college policy regarding academic probation, suspension and dismissal.	no
Camden	Camden County College has implemented an early warning counseling system to identify students in academic difficulty. These students are restricted to 12 credits until remedial courses are completed. Students who fail any basic skills courses are given extensive counseling. Students who are suspended are permitted to return to the institution only if they can demonstrate mastery of the English or Math course they failed initially (they may take these courses in the summer).	yes
Cumberland	Students are required to remove basic skills deficiencies. A student will be placed (1) on warning if cumulative average falls below 1.6, (2) on probation if cumulative average falls below 1.3 at the completion of 12-23 semester hours. (Students who may not benefit from college instruction are referred to local audit basic education courses.)	yes

Essex	Students who fail to complete a required remedial course on their second try are placed on academic probation and must follow a procedure prescribed by the Counseling Department to reenter the College. A new policy which would provide for formal dismissal from the College is now being discussed.	yes
Gloucester	Students failing to remove deficiencies are required to reenroll in those remedial courses for which they received unsatisfactory grades. For students with G.P.A. 2.0, a restriction to half-time or three quarter time is imposed.	no
Hudson	If a student fails to remove basic skills deficiencies by the end of his/her third semester, the student may not continue to enroll at the college. Such students are provided with counseling concerning educational and employment alternatives.	yes
Mercer	Regular college policy regarding academic warning, probation and dismissal.	yes
Middlesex	Without completing the basic skills related, college-level courses and without maintaining a satisfactory GPA in the courses attempted, students do not persist long in the College.	yes
Morris	Students are advised to take a limited credit load. Any student who does poorly in the first semester is placed on probation. The following semester he is academically dismissed if his GPA does not reach the institution's minimal standards.	yes (English) no (Math)
Ocean	Students must pass the remedial course with a "C" or repeat the course. Students cannot take another course in the skill area until the remedial course is passed. Load limits remain in effect until the remedial courses are passed.	yes
Passaic	The Judicial Review Committee determines restrictions on an individual basis.	
Salem	Regular college policy regarding academic warning, probation and dismissal.	no
Somerset	Students are subject to individual review by the Academic Standards Committee at the College at the end of the semester. Such students may be placed on probation, suspended or have limits placed on their credit load.	no

Union	In Fall, 1981, those students required to enroll in developmental course(s) and who did not enroll were required to meet with the academic Vice President and provide a reason.	yes
UCTI	Regular college policy regarding academic warning, probation and dismissal.	no

Sector: State Colleges

Glassboro	Recommendation for dismissal from college if remediation is not completed within specified time period.	yes
Jersey City	Students who do not remove skills deficiencies are restricted in the courses they may select.	no
Kean	Any student who does not successfully complete a developmental course within a year of initial registration in that course will be subject to dismissal.	yes
Montclair	Students failing to complete the required developmental courses prior to the completion of 27 semester hours are placed on academic furlough and may register only for developmental courses.	yes
Ramapo	Names of students are forwarded to the Committee on Academic Standards for review and action. The Committee's action could result in probation or dismissal dependent upon the situation.	yes
Stockton	Students who fail BASK course are given diagnostic evaluation and provided with tutoring during the next semester to prepare for a final competency exam. Students who do not demonstrate competency within 2 active semesters are recommended for dismissal for a period of at least one year. Students must demonstrate competency on NJCBSPT before readmission is possible.	yes
Trenton	Certain curricula are more restrictive than others; requirements vary.	yes
Wm. Paterson	Students are not permitted to continue at the college if not completed before registering for 46th credit.	yes
Thomas A. Edison	Students may not continue progress toward degree completion; the only college service they may receive is advise regarding basic skills remediation.	yes

Sector: NJIT/Rutgers

NJIT	Students cannot go on to other courses which require specific basic skills proficiencies without first removing their deficiencies.	no
Rutgers University		yes

APPENDIX C

Reasons Given By Colleges For Not Testing Appropriate Students

- Students failure to respond to testing notices
- Late admission and walk-in registration
- Difficulty identifying non-matriculated students enrolling for the 12th credit and testing part-time students who are on campus for only few hours a week
- Difficulty with students registering by mail
- Difficulty with students registering at off campus locations
- Administrative problems
- Incomplete information on transfer students
- No computer check to reject registrations without basic skills results

APPENDIX D

The following listing by sector consists of problems that institutions have encountered in testing, placing and instructing students in basic skills.

Community Colleges

- Difficulty in testing part-time students
- Slow turn around time for essay score
- Placement problem with non-traditional students
- Expense of basic skills instruction (as well as tutoring and counseling) requires enriched funding.
- Concern regarding students with very low skills levels
- Insufficient funding for implementation of a computer based student follow-up and program evaluation system.
- Difficulty in establishing a computer based system for monitoring matriculation, registration, basic skills testing and follow-up
- Difficulty in having students accept their need for remediation
- Lack of attendance constitutes greatest impediment to instructional process

State Colleges

- Turn around time for test scores presents a problem
- Financial problem meeting instructional needs of part-time students
- Serious problem getting data (for placing and tracking students) from the Computer Center
- Late admissions make it difficult to locate student prior to next semester's registration
- Appears to be difficult for students in remedial classes to assimilate skills processes and simultaneously or immediately following skills courses, achieve a rewarding academic experience in other content areas
- Problem with placement of students tested elsewhere when such students were not required to take remediation at the previous institution

Rutgers/NJIT

- Transfer students with accumulated credits presented a problem in the past, but measures are now in effect to avoid any problems

APPENDIX E

NEW JERSEY BASIC SKILLS COUNCIL
DEPARTMENT OF HIGHER EDUCATION
TRENTON, NEW JERSEY

1981 ANNUAL BASIC SKILLS QUESTIONNAIRE

College____________________________ Date______________________

Completed by: Name____________________ Title______________________

Telephone________________

Approved by: Name____________________ Title______________________

Table 1 - Testing[1]

	Full-Time (A)	Part-Time[3] Degree-Seeking[4] (B)	Part-Time[3] Non-Degree Seeking Registering for 12th Credit[5] (C)
1. No. of enrolled students required to be tested in Fall 1981[2]			
2. No. of students in Item 1 tested in 1981 test cycles 1 thru 6			
3. No. of students in Item 1 tested outside 1981 cycles 1 thru 6			
4. No. of students in Item 1 who were not tested (Item 1 minus Items 2 and 3)			

[1] For Items 1, 2, 3 and 4 identify students as full-time or part-time on the basis of your enrollment records.

[2] Based on the Department of Higher Education's definitions of the students to be tested. See Appendix A. EOF Students must be included. ESL/bilingual students should be excluded from this table. See Table 4.

[3] If you test all part-time students, there is no need to differentiate between (B) and (C). Include all part-time students in Column (B).

[4] See Appendix A, #2.

[5] See Appendix A, #3.

College________________

Table 2 - Placement[1]

	Full-Time		Part-Time[2]	
	#	%	#	%
1. Number and percentage of students reported in Items 2 and 3 of Table 1 who were identified as needing remedial/developmental work in:				
A. Reading				
B. Writing				
C. Math Computation				
D. Elementary Algebra: 1. As defined by the College[3]				
2. All Others[4]				
E. Other Math (Specify______________)				

---

[1] If one course covers more than one skill area, i.e. reading and writing, indicate so through a footnote or by bracketing the two skills areas and report one set of data.

[2] Based on the sum of columns (B) and (C) in Items 2 and 3 of Table 1 (i.e. Part-time degree seeking plus part-time, non-degree seeking, registering for 12th credit).

[3] "As defined by the College" is defined as the number and percentage of students who fall below your college's placement criteria and are required to take elementary algebra.

[4] "All Others" is defined as the number and percentage of students who fall below your college's placement criteria but are not required to take elementary algebra.

College____________________

Table 2A - Remedial/Developmental Enrollment[1]

	Fall 1981[3]		Spring 1982[4]		Total Enrolled				Students Not Enrolled in Remedial/Developmental Courses[6]	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time		Part-Time		Full-Time	Part-Time
	#	#	#	#	#	%[5]	#	%[5]	#	#
1. Number of students reported in Table 2 who enrolled in remedial/developmental course in the following areas:[2]										
a. Reading										
b. Writing										
c. Math Computation										
d. Elementary Algebra (Compute percentage on Item D.1. of Table 2.)										
e. Other Math										

---

[1] GIVE UNDUPLICATED NUMBER IN EACH CATEGORY. DO NOT include those students repeating a specfic course or enrolling voluntarily (i.e. those not included in Table 2).

[2] If one course covers more than one skill area, i.e. reading and writing, indicate so through a footnote or by bracketing the two skill areas and report one set of data.

[3] If students identified for remedial/developmental work in Fall 1981 took the remedial/developmental course in the summer after being tested, include those students in Fall 1981.

[4] Include students enrolled in Winter 1982, if applicable.

[5] Percent of the numbers reported in Table 2.

[6] Report the number of students shown in Table 2 who were enrolled in college in Spring 1982 but who had not enrolled in the appropriate remedial/developmental course either in Summer 1981, Fall 1981, or Spring 1982.

College ______________________

Table 2B - Placement

Skill Area[1]	I Is Placement in Remedial/ Developmental Courses Required?[2]	II Criteria used to Identify Students with Skills Deficiency[3]
a. Reading	____Yes ____No	
b. Writing	____Yes ____No	
c. Math Computation	____Yes ____No	
d. Elementary Algebra	____Yes ____No	
e. Other Math	____Yes ____No	

---

[1] If more than one skill area is served by a course, indicate so through bracketing.

[2] If the institutional policy on placing students in remedial courses is not uniform for all students, please describe the exceptions in your response to question 4, page 9.

[3] Include the specific criteria (e.g., test scores, high school grades etc.). Name the specific test and section of test (e.g., NJCBSPT - Reading Comprehension) and the cut scores used to differentiate remedial/ developmental from non-remedial/developmental (e.g., 165). In all cases where the NJCBSPT is used, report

College ______________________

Table 2C - Exit Criteria

Skill Area & Course[1]	Criteria Used to Ascertain that Students have Removed Skills Deficiency[2]
a. Reading	
b. Writing	
c. Math Computation	
d. Elementary Algebra	
e. Other Math	

---

[1] If more than one skill area is served by a course, indicate so through bracketing.

[2] Specific levels on tests, examinations, grades or other end of course measures used to ascertain that students have acquired the minimum level of competency in the specific skill area.

College____________________

Table 3 - E.O.F. Students[1]

1. a. According to the Department of Higher Education's definitions, how many of the EOF students were required by your program or institution to be tested using the NJCBSPT before Summer 1981? _____ Summer 1981? _____ Fall 1981? _____

   b. How many of these students were tested in Summer 1981? _________ Fall 1981? _________

   c. How many of these students took remediation during Summer 1981 before being tested with NJCBSPT? ____________.

   d. How many Fall 1981 entering E.O.F. freshmen were also ESL/Bilingual students? ______

      (1) How many of these students were not tested with the NJCBSPT? ___________

      (2) How many of those exempted from taking the NJCBSPT were placed in ESL/Bilingual courses? _____________

2. How many EOF students who were tested were identified as needing remediation and enrolled in remedial courses in the following areas:

Summer '81 / Fall '81	EOF Students Identified as Needing Remediation		EOF Students Actually Enrolled in Remedial Courses		EOF Students Successfully Completing Remedial Courses	
Remedial Courses	No.[2]	Percent[3]	No.	Percent[4]	No.	Percent[5]
a. Reading						
b. Writing						
c. Computation						
d. Algebra						
e. Other Math						

---

[1] Include all EOF students admitted for Fall 1981, who also participated in the EOF Summer pre-Freshman Program.

[2] After being tested with the NJCBSPT.

[3] Based on the figures supplied in Item 1b above.

[4] Based on the number of students identified as needing remediation (first column).

[5] Based on the number of students enrolled in the remedial course (third column).

College________________

Table 4 - ESL/Bilingual Students

As stated in Appendix A, "students enrolled in a bilingual or English as-a-Second Language (ESL) program need not be tested until they have completed such a program." The Basic Skills Council and the Office of Bilingual Programs of the Department of Higher Education are interested in obtaining more information about ESL/Bilingual students.

1. a. How many Fall 1981 ESL/Bilingual students were tested in 1981 with the NJCBSPT test cycles 1 thru 6?______________________

   b. How many students in 1.a. were entering Freshmen?___________

2. How many Fall 1981 entering ESL/Bilingual Freshmen were not tested?____________________

3. For all entering ESL/Bilingual freshman, (the sum of 1.b. plus 2), how many were placed in each of the following courses:

   a. Non ESL/Bilingual remedial courses only___________________

   b. Bilingual remedial courses and ESL courses only____________

   c. ESL courses only__________________

   d. Non ESL/Bilingual remedial courses and ESL courses__________

4. If students complete ESL/Bilingual courses before taking the NJCBSPT, are they then required to enroll in remedial courses if they do not perform well on the NJCBSPT? ☐ Yes ☐ No

   Comments:____

   ____

   ____

   ____

5. Specify any other test(s) used in placing ESL/Bilingual students in courses (remedial, developmental, and regular college level).

   ____

   ____

   ____

   ____

   ____

College ________________

ADDITIONAL INFORMATION ON TESTING, PLACEMENT AND REMEDIAL COURSES (Attach additional sheets if necessary.

1. A. If students do not complete remediation in math, are they allowed to take regular college level courses in math? ☐ Yes ☐ No

   Comments:

   B. If students do not complete remediation in Reading, are they allowed to take regular college level courses in English? ☐ Yes ☐ No

   Comments:

   C. If students do not complete remediation in Writing, are they allowed to take regular college level courses in English? ☐ Yes ☐ No

   Comments:

2. What practice does your college follow in allowing students with skills deficiencies to take regular college level courses other than English and math?

College ________________

3. Are graduation credits given for remedial/developmental courses?

Comments: ☐ Yes ☐ No

4. Are placement policies and procedures the same for A. Full-time and Part-time students B. Students enrolled in different curriculums)?

A. ☐ Yes ☐ No

Comments: B. ☐ Yes ☐ No

5. Is there a time or credit-hour limit within which students needing remediation must complete remediation? ☐ Yes ☐ No

If yes, specify below.

6. Describe the institutional policy regarding retention of students who fail to remove the basic skills deficiencies. Specify any restrictions put on them (e.g. limited credit load, enrollment in a curriculum, etc.).

College_______________

7. If any of the students who were required to be tested were not tested (Table 1, Item 4), please give reasons.

8. Please indicate any problems your institution has encountered in testing, placing, or instructing students in Basic Skills or in evaluating your basic skills (remedial/developmental) program.

Who Must Take the New Jersey College Basic Skills Placement Test?

The New Jersey Board of Higher Education requires that the following students take the New Jersey College Basic Skills Placement Test:

1. all freshmen who will be entering a New Jersey public college in the fall of 1978 and at any date thereafter;
2. all full-time and part-time freshmen who are seeking a degree;
3. any student who does not initially seek a degree but who registers for a course that would result in the accumulation of 12 or more credits;
4. any freshmen transfer student who has not taken the test;
5. students enrolled in a bilingual or English as a Second Language (ESL) program may be tested when they have completed such a program;
6. an institution may require additional categories of freshman students to be tested.

Students will be tested only after they have been admitted to a college. First-time students who hold a bachelor's degree need not be tested. Students enrolled in a bilingual or English as a Second Language (ESL) program need not be tested until such time as they complete such a program.

It is therefore intended that, with the exceptions specified above, all freshman students be tested after they have been admitted to the college and before they register for classes.

APPENDIX F

Guidelines for Preparation of Institutional Report on Remedial[1] Program Effectiveness

In order to obtain more reliable and useful information on the functioning and effectiveness of instituional remedial programs, the New Jersey Basic Skills Council, on the advice of the Assessment Committee, has revised the guidelines issued by the Council last year. The revised guidelines specify in greater detail the minimally necessary elements of data and information considered reasonable and feasible to be included in an institutional program effectiveness report. In order not to make the guidelines too burdensome, the information requested has been kept to the minimum, but these guidelines should be in no way construed to imply that the institutions are not free to use any procedures not included in the guidelines to evaluate their programs. In fact, the Council welcomes and would like to encourage institutions to go beyond the guidelines and try other methods which may yield useful information on the effectiveness of their programs.

For a meaningful interpretation of data reported in the effectiveness report, it is necessary that while analyzing the data, the institutions should keep the following in mind.

a) The study group should be confined to students tested with the NJCBSPT in fall, 1981 and reported on the Annual Basic Skills Questionnaire. The same group of students should be followed up as a cohort in all follow-up studies. This would mean, for example, that many students enrolled in remedial courses may have to be excluded from the study if they are not part of the tested cohort.

b) Separate data should be analyzed and reported for each basic skills area, viz., reading,[2] writing, computation and elementary algebra.

In order to help institutions in implementing the guidelines, the Council plans to conduct a series of workshops, which, among other topics, would cover preparation of data files, analysis and interpretation of data, and writing of the report. If necessary, the Council may even consider providing consultants to help individual institutions in establishing an appropriate program evaluation system. In the meanwhile, institutions are encouraged to consult Evaluating College Remedial Programs prepared by Jeffrey Smith and Carl Schavio for the Council.

---

[1] The term remedial in these guidelines includes both "remedial" and "developmental" programs designed to help skills deficient students improve their deficiencies in the areas of reading, writing, math computation, and/or elementary algebra.

[2] The distinction between the areas of reading and writing may be ignored if the institution treats them as part of a single area of verbal skills.

Guidelines

1.0 HISTORY OF PROGRAM

Important to an understanding of a program's effectiveness is a perspective of that program--how did it start, how far has it come, and where is it headed. Briefly summarize, in about two pages, major developments in regard to placement policies, remedial instruction, support services, supervision of program, etc. Describe in a separate section significant changes in the above areas since last year's report was written.

2.0 DESCRIPTION OF PROGRAM

2.1 Placement Policies and Procedures

Describe the current placement policies. Responses to the following questions would help in a better understanding of those policies.

a. What rationale and/or data was used in setting the placement policies?

b. How are students informed of their basic skills test results and need for remediation, if necessary?

c. Is placement in remedial courses required or optional in each of the skills areas? If required, how soon must students enroll in remedial courses?

d. How much time are students allowed to meet college's minimum proficiency requirements?

e. Does the college have a policy which prevents skills deficient students from enrolling in college-level courses? If yes, describe the policy.

f. How are placement policies monitored and enforced?

2.2 Placement and Exit Criteria

Describe the placement criteria used in each of the skill areas of reading, writing, math computation and elementary algebra. How are the criteria set and how are they validated, i.e., how does the institution determine that the use of the criteria is resulting in appropriate placement of students in remedial versus college-level courses.

Are the exit criteria in each of the remedial courses or sequence of courses the same as the college's definition of minimum proficiency (or placement criteria)? If not, describe the relationship between the two.

2.3 Remedial Courses

Describe the remedial courses in the four skill areas in terms of goals and objectives, topics covered, modes of instruction, out-of-classroom instructional requirements (e.g., tutorials, skills labs, etc.). Describe the relationship among these courses in terms of sequence, prerequisites, and articulation with regular college-level courses. Also, describe how it is ensured that students passing a remedial course have attained at least the minimum skill proficiency required in that area?

2.4 Staffing of Remedial Courses

Describe whether or not your college provides or requires any special training for those faculty members who teach remedial courses?

In instances where those who teach remedial courses do not also teach related non-remedial courses, describe the procedure which is used to ensure appropriate interaction between remedial and nonremedial faculty on curriculum matters.

2.5 Support Services

Describe what and how instructional and noninstructional support services are provided to aid remedial students (e.g. counseling, academic advisement, tutorials, mentors, etc.).

3.0 RESULTS

3.1 Efficacy of Placement Policies and Remedial Program

Institutions may choose to describe the efficacy of their placement policies and remedial program in a variety of ways, but that description should include, at the minimum, the following data. For each of the four skill areas, and separately for part-time and full-time students, supply the following sets of tables. The data for the first set of tables (A) should be identical to that reported in the Annual Basic Skills Questionnaire filed by the College.

Table A - Testing and Placement of Students

i Number of students tested.

ii Number and percent of tested students identified for remediation

iii Number and percent of students (of those identified for remediation) enrolled in remedial courses in Fall 1981 and Spring 1982.

Guidelines

iv Number and percent of students identified for remediation who were enrolled in the College in the Spring 1982 but who had not taken the needed remedial courses.

Table B - Enrollment in and Completion of Remedial Courses

i Number of students enrolled in the respective remedial courses in Fall 1981 and Spring 1982.

ii Number and percent of enrolled students who passed, failed, withdrew, or did not complete the course for any other reason.

iii Number and percent of students identified for remediation who were enrolled in the college in Spring, 1982, but who had not completed remediation by the end of Spring 1982. These would include skill deficient students who either did not enroll in the remedial course or who enrolled in it but did not complete remediation in this area.

Table C - Follow-up of Full-time Students

Divide all tested full-time students into the following four groups for each skill area.

(a) Students who did not need remediation.

(b) Students who needed remediation and who completed it by the end of Fall, 1981.

(c) Students who needed remediation but who did not enroll in the specified remedial course.

(d) Students needing remediation who enrolled in the remedial/developmental course, but who did not pass it.

Compare the above four groups in terms of the following data:

i Number and percent returning in Spring 1982 as full-time, part-time or not returning.

ii GPA in Spring 1982, based on college-level courses only. (Provide both mean GPA and percentages of students above and below 2.00.)

iii Ratio between college-level credits attempted[1] and earned in the Spring 1982.

---

[1] As recorded at the end of your institution's drop/add period.

Guidelines

Table D - Performance in Selected College-Level Courses

Select one or more introductory college level courses (non-remedial) in each of the following areas: English, mathematics, social science/ humanities, and natural science. Identify students enrolled in these courses who had been tested in Fall, 1981. Divide the tested students into three groups.

(a) Students who did not need remediation in the skill area related to that course.

(b) Students who needed remediation and who completed it before enrolling in the selected course.

(c) Students who needed remediation but who did not complete it before enrolling the course.[1]

Compare the passing rates and grade distribution of the three groups in the selected courses.

For a more meaningful interpretation of data, this part of the Study should be conducted separately for part-time and full-time students.

3.2 Effectiveness of Remedial Courses

Several research designs are available for evaluating the progress made by students who complete remedial courses. However, despite its weaknesses, the single-group, pre-test and post-test design is very popular. This design is not only easy to use, but if certain precautions are taken it can prove to be a useful evaluation tool. In the absence of a better alternative, institutions should use this design. To help institutions make appropriate use of this design in drawing appropriate conclusions, the Assessment Committee is preparing a technical paper which will be sent to the institutions as soon as it is ready.

---

[1] Include those students who never took the needed remediation, failed or withdrew from the remedial course, or have only completed parts of the remediation.

A NON-TECHNICAL PAPER ON THE USE OF A SINGLE GROUP PRE-TEST AND POST-TEST DESIGN IN THE EVALUATION OF THE EFFECTIVENESS OF REMEDIAL INSTRUCTION[1]

As persons familiar with research designs know, except for a truly experimental design in which remedial students are randomly assigned to a control and a treatment group, and remedial instruction is denied to students in the control group, there are no fully satisfactory designs for evaluating the instructional effectiveness of a remedial course. This makes it necessary that instead of depending upon any one method, accumulative evidence from multiple sources should be used in drawing any valid conclusions about the effectiveness of remedial instruction. The Assessment Committee of the New Jersey Basic Skills Council kept this goal in mind while formulating the "Guidelines for preparation of Institutional Report on Remedial Program Effectiveness."

After a review of several designs, single group, pre-test and post-test design was selected as one of the methods which could yield useful information on the effectiveness of remedial programs. There were two major considerations in doing this. First, this was found to be the most convenient design to use as almost all new New Jersey colleges administer NJCBSP tests to their incoming students which could be used as pre-tests, and the availability and suitability of different forms of these tests make it easy to administer them as post-tests. Secondly, despite the weaknesses in the design, it was felt that if certain precautions were taken, this design could provide useful information which is easily understood even by administrators and faculty with no research background. The purpose of this paper is to describe some of the major weaknesses associated with this design and to suggest some feasible remedies.

---

[1] Prepared by Dr. Madan Capoor for the Assessment Committee of the New Jersey Basic Skills Council.

BRIEF DESCRIPTION OF THE DESIGN

In the single group, pre-test and post-test design, a test which can measure the skills to be remediated at an appropriate level (appropriate for the abilities of students before and after the instructional treatment) is administered as a pre-test before the start of remedial instruction, and a different form of the test is administered as a post-test after the remedial instruction is over. Two of the essential ways to analyze the data are:

A. Mean Differences:
Based on the scores of students who took both the pre-test and the post-test, the means of pre-test and post-test scores should be computed and the significance of the differences between the two means should be tested through the dependent *t*-test.[2] To get a more meaningful idea of the size of the difference between the two means, the mean difference may be divided by the standard deviation of the pre-test to obtain the size of the difference in terms of standard deviation units. As two different forms of a test are used as pre-test and post-test respectively, scaled scores instead of raw scores should be used in these analyses to allow any valid comparisons to be made.

B. Percent of Students Reaching Minimum Competency:
The percent of students obtaining post-test scores above the minimum level required to avoid being placed into remediation may be computed. If a single test is used for placement, and the pre-test is either the placement test or another form of it, the cut-off score on the placement test would indicate the minimum proficiency level. On the other hand, if multiple tests or criteria are used in placement, a score on the pre-test would have to be identified which could be equated to the level on the multiple criteria for placement.

---

[2] A description of the procedure can be found in any elementary book on statistics. In cases where students are tested more than two times, a more suitable procedure will be an analysis of variance for repeated measures. An example of such repeated measures would be where more than one course or multiple components of the remedial course are offered, and post-testing is done at the end of each part of the course.

PROBLEMS ASSOCIATED WITH THE SINGLE-GROUP PRE-TEST AND POST-TEST DESIGN, AND SUGGESTED REMEDIES FOR THEM

In order to provide any useful information, evaluation of a remedial course should be able to answer two critical questions; have the students improved their skills during the course, and if so, can that improvement be attributed to remedial instruction? The increase in the post-test scores over the pre-test scores are supposed to represent the gain in skills registered by students. However, due to several factors which can threaten the internal validity of an evaluation study, unambiguous interpretation of the pre-post differences can become very difficult. For example, these differences may not adequately represent the true differences, and/or the differences may not be attributable to remedial instruction only, but may be caused by various extraneous factors or may be due to spurious effects as discussed below. Four of the major factors which threaten the unambiguous interpretation of the findings resulting from a single group, pre-test and post-test design, and how their effects can be minimized are discussed below.

I. Floor and Ceiling Effects

When the range of abilities of students to be tested happens to be larger than the range of abilities which can be measured by a test, the administration of such a test can result in floor or ceiling effect. Floor effect occurs when a number of tested students have abilities lower than the lowest range of abilities measured by the test, while ceiling effect would occur when a considerable number of students possess abilities which are beyond the highest level measured by the test.

Use of a test with inadequate measurement range can create two kinds of problems. The test will not be able to discriminate adequately among students with either the lowest or the highest range of abilities.

Secondly, when used in a pre-post test situation, the test will fail to register adequately the gains made by students in the lowest or the highest ability levels. Pre-test ability levels lower than the minimum level measured by the test, and post-test ability levels higher than the maximum level measured by the test will not be registered by the test. Consequently, the apparent differences between the pre-test and post-test scores would be an underestimation of the true differences.

To detect the floor and ceiling effects, frequencies of scores on both the pre-test and post-test should be examined. If large frequencies are found in the lowest or the highest score intervals, they would strongly suggest a presence of the floor or the ceiling effect respectively. Also, if the pre-test and post-test scores of students in the lowest or the highest range of the test show very small differences, while scores for the rest of the students show much larger differences, it will be another indication of the presence of floor and/or ceiling effect.

Suggested Remedy:

In using NJCBSPT for pre- and post-testing of remedial students, it is not very likely that ceiling effect would be encountered. On the other hand, there is a good likelihood of finding the floor effect. If this happens, it would suggest the presence of very low ability students in the remedial course. This could be handled in two ways. Faculty should decide whether the remedial course is appropriate to meet the needs of those low ability students. If not, a lower level course may become necessary. On the contrary, if the remedial course is considered appropriate for the low ability students, another test with lower measuring range should be used instead of NJCBSPT for pre- and post-testing. However, it should be made certain that this in turn will not result in a ceiling effect on the post-test. Even if another test is used as a pre-test, the NJCBSPT can continue to be used as the placement test as even with the floor effect it could still identify students who would need remediation.

As pre-testing and post-testing would have already been conducted for this year, none of the above suggestions would help in interpretating this year's data, if the results show the presence of floor effect. In such a case, the scores for students in the lowest score interval on the pre-test should be separated from rest of the scores, and the remaining scores should be used for further data analysis and interpretation. Even if the scores for the lowest group are analyzed, it will be very difficult to draw any valid conclusions from it irrespective of whether or not the post-test scores show any significant gain over the pre-test scores. If they do not show a significant gain, it may be due to the floor effect, but if they do, it may reflect the regression effect which is discussed next.

II. Regression Effect

In the words of Smith and Schavio[3] "the regression in fact occurs when the bottom portion of a distribution of scores that have measurement error[4] are isolated and then retested. Even if the retesting occurs the next day, the scores will tend to rise.[5] This is because the people in the bottom portion of the distribution are more likely to have had a negative (or depressing) error made on their pre-test measurement. When retested, as a group, their errors would tend to even out (sum to zero). Thus, the post-test mean score would be higher than the pre-test mean score."

By the very nature of the placement procedures, the lowest scoring students on the Basic Skills Placement tests are placed in a remedial course, and at the end of the course they are then post-tested with another form of the pre-test. When assessing the difference between the pre-test and post-test means, in such a case, it would be difficult to decide how much of the improvement in the means is spurious and due to regression effect and how much of it is real and can be credited to remedial instruction.

---

[3] Smith, J. K. and Schavio, C. J. Evaluating College Remedial Programs, Rutgers University, 1980.

[4] It is hard to imagine a test on human skills which would not have measurement error.

[5] The opposite of this would occur if the top scoring students are retested. Their scores are likely to go down reflecting their tendency to regress toward the mean.

Suggested Remedies:

A. Instead of using the placement test scores as pre-test scores, another form of the test could be administered as a pre-test on the first day of class to all students enrolled in the remedial course. This will tend not only to neutralize the regression effect but would also allow the remedial students to challenge their placement in the remedial course by improving their test performance, which some of them are likely to do. If a separate pre-test is administered, the placement and the pre-test scores could be used to detect the regression effect. If there is a regression effect, the correlation between the two scores would be less than 1.0, and the pre-test mean would be higher than the mean of placement scores.

B. If the use of placement scores as pre-test scores cannot be avoided, the following procedure may be used to help in a better interpretation of the results. Divide the students in two or three groups on the basis of their pre-test scores: viz. low, middle and high scoring groups. Use three groups if there are 150 or more students, otherwise, have two groups. Compute change scores (difference between pre-test and post-test scores) for each student and compute mean change scores for the three groups. If you see a trend where the lowest group has the highest change mean, the middle group the next high, and the highest group, the lowest change mean, it would be a clear indication of the presence of regression effect. If this happens, separate t-tests may be conducted for the three groups to see whether the pre-test and post-test means are significantly different in all the three groups.

III. Extraneous Factors

As remedial students take many other courses besides the remedial course being evaluated and are likely to be exposed to other learning environments both within and outside the College, it is quite likely that these learning opportunities would have some impact on the level of their skills. Hence, the improvement in their skills, represented by the improvement of post-test over pre-test scores, could not be attributed directly to remedial instruction alone.

Suggested Remedy:

Except through the use of a control group, there is no certain way to control for the effects of any external variables. However, these effects can be minimized by not extending the time between pre-test and post-test beyond what is absolutely necessary. For example, efforts should be made to confine the use of pre-test and post-test design to students who take remediation within the first semester of their being tested. If students delay their enrollment in a remedial course beyond the first semester, they should again be pre-tested at the beginning of the remedial course, or if remedial instruction in an area consists of more than one course, pre- and post-testing should be conducted at the beginning and end of each course.

IV. Motivational Differences

As was pointed out by Smith and Schavio, there is a likelihood that students would take the pre-test (if that was also the placement test) quite seriously as their placement in or out of a remedial course would depend upon their performance on the test. However, the administration of another test as a pre-test after the students have been placed in the remedial course and the administration of the post-test may not be taken too seriously by students if they know that their performances on these tests are not going to affect them personally. Failure to do their best on these tests would vitiate the results and may sometimes result in the post-test scores being lower than the pre-test scores.

Suggested Remedy:

If a pre-test is administered subsequent to the placement test, the second administration of the test could be used to allow students to challenge their initial placement in the remedial course.

Similarly, students may be told that their grades in the remedial course, though not totally dependent on the post-test, could be affected by their performance on the post-test. Also, the administration of the post-test could be integrated with the final examination schedule.

While there is no guarantee that following the steps outlined above would remove all the clouds hanging over the findings resulting from a single-group, pre-test and post-test design, they would go a long way in increasing the confidence with which they could be interpreted.

(4858B)

ERIC Clearinghouse for Junior Colleges
8118 Math-Sciences Building
University of California
Los Angeles, California 90024

OCT 7 1983